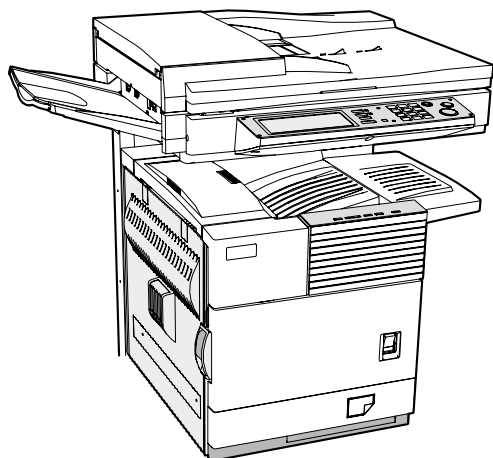


SHARP SERVICE MANUAL

CODE : 00ZARM280UA1E



LASER PRINTER

MODEL AR-M280U/M280N

[1] INTRODUCTION

These models are a modified version of the AR-M350U/M350N, providing a different printing speed.

This Service Manual, therefore, describes only the different points from the AR-M350U/M350N and supplementary items.

For items which are not described in this Service Manual, refer to the following Service Manuals and Parts Guides.

•AR-M350/M450	Service Manual : 00ZARM350/A1E	Parts Guide : 00ZARM450/P1E	Circuit Diagram : 00ZARM350/C1/
•AR-P350/P450	Service Manual : 00ZARP350/A2E	Parts Guide : 00ZAR350LPP1/	Circuit Diagram : 00ZARP350/C1/
•AR-M350U/N•AR-M450U/N	Service Manual : 00ZARM350UA1E		
•AR-NC5J	Service Manual : 00ZARNC5J/A1E		

Note: Depending on the option, additional service documentation may be required.

[2] LIST OF DIFFERENCES FROM AR-M350U/N

A.Product composition

		Model Name	Network Printer Option Model		NIC Standard Model		Note
Base Engine			AR-M350U	AR-M280U	AR-M350N	AR-M280N	
Print Speed			35ppm	28ppm	35ppm	28ppm	
Multi Function Controller		AR-M11	Not Available	Not Available	Standard	Standard	
Multi Function Controller(for U-Model)			Standard	Standard	Not Available	Not Available	No registered as a product
Print Server Card		AR-NC5J	Option	Option	Standard	Standard	
Printer Extension Kit		AR-P14	Option	Option	Standard	Standard	*1
Hardware	MFP-ROM		Only U-type 35/45ppm	Only U-type 28ppm	Only M-type 35/45ppm	Only M-type 28ppm	

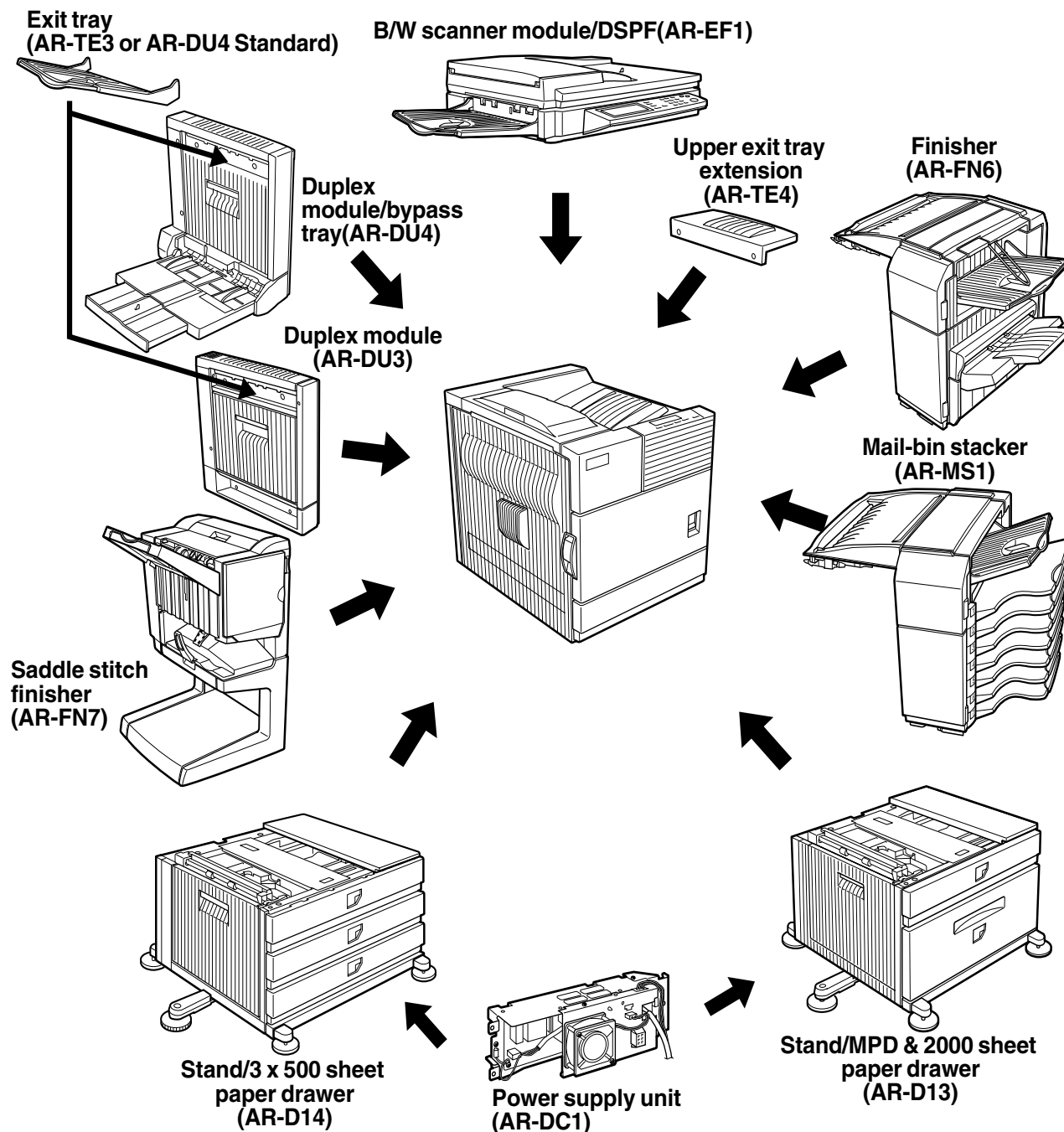
*1: Installation of the AR-P14 on U-series machines provides functions equivalent to the M-series machines.

Parts marked with “” are important for maintaining the safety of the machine.

To maintain the safety and performance of the machine, use only the replacement parts specified.

[3] CONFIGURATION

1. System Configurations



2. Standard

Category	Model Name	Other options required for the installation/mounting. (Options must be ordered separately.)	Remarks
MFP model (35ppm)	AR-M350	<ul style="list-style-type: none"> B/W Scanner module/DSPF (AR-EF1) Scanner Rack (AR-RK1) Stand/MPD&2000 sheet paper drawer (AR-D13) or Three paper drawer stand (AR-D14) Power supply unit (AR-DC1) 	
MFP model (45ppm)	AR-M450		
MFP model (28ppm) (Without network printer function)	AR-M280U		
MFP model (35ppm) (Without network printer function)	AR-M350U		
MFP model (45ppm) (Without network printer function)	AR-M450U		
MFP model (28ppm) (With NIC card (standard))	AR-M280N		
MFP model (35ppm) (With NIC card (standard))	AR-M350N		
MFP model (45ppm) (With NIC card (standard))	AR-M450N		

3. List of combination of peripheral devices

A.AR-M280U

As shown in the table below, some other peripheral devices (B) may be needed for installation of a peripheral device (A) and some peripheral devices cannot be installed together.

A

Related for scanner feature

B/W scanner module/DSPF	AR-EF1	—	○	○ ^{*1}																			
Scanner rack	AR-RK1	○	—	○ ^{*1}											○						○		

Related for paper feed unit

Stand/3 x 500 sheet paper drawer	AR-D14			—	×																○		
Stand/MPD & 2000 sheet paper drawer	AR-D13			×	—																○		
Duplex module/bypass tray	AR-DU4			○ ^{*1}	—		×						×								○ ^{*2}		
Duplex module	AR-DU3			○ ^{*1}		—															○ ^{*2}		

Output units

Saddle stitch finisher	AR-FN7			○ ^{*1}	×	○	—	×		×	×										○		
Finisher	AR-FN6			○ ^{*1}			×	—	×		×	×									○		
Mail-bin stacker	AR-MS1			○ ^{*1}				×	—		×										○		
Exit tray ^{*4}	AR-TE3					○ ^{*1}	×	×	×	—		×											
Upper exit tray extension	AR-TE4							×	×		—												
Punch unit	AR-PN1			○ ^{*1}	×	○	○	×		×		—									○		

Related for extension of functions and others

PS3 expansion kit	AR-PK1																—						
Network scanner expansion kit	AR-NS2	○	○	○ ^{*1}											○		—						
Facsimile expansion kit	AR-FX5	○	○	○ ^{*1}														—					
Fax memory (8 MB)	AR-MM9	○	○	○ ^{*1}														○	—	○			
Power supply unit	AR-DC1			○ ^{*1}																	—		
Hard disk drive	AR-HD3																					—	
Multi-function controller board ^{*5}	AR-M11	○	○	○ ^{*1}											—								×
Print server card ^{*6}	AR-NC5J															—						○ ^{*1}	
Network printer kit	AR-P14															○						—	

B

○ = Must be installed together.

○^{*1} = Any of the units must be installed together.

○^{*2} = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.

×

^{*3} = Standard

^{*4} = AR-DU4 Standard

^{*5} = Attachment of the AR-P14 provides the similar functions.

^{*6} = Not Available

B.AR-M280N

As shown in the table below, some other peripheral devices (B) may be needed for installation of a peripheral device (A) and some peripheral devices cannot be installed together.

</

○ = Must be installed together.

○^{*1} = Any of the units must be installed together.

○^{*2} = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.

×

*3 = Standard

*4 = AR-DU4 Standard

*6 = Cannot be attached.

[4] SPECIFICATIONS

1. Basic Specification

A. Base Engine

(1) Form

AR-M280U/M280N	Console type
----------------	--------------

(2) Engine speed

Paper size	AR-M280U/N
A4, 8.5" x 11"	28ppm
A5R/5.5" x 8.5"R	28ppm
B5	28ppm
B4/8.5" x 14	16ppm
A3/11" x 17"	14ppm

(3) Engine composition

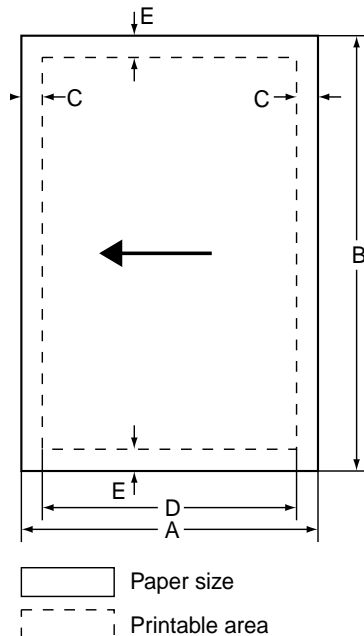
Photoconductor type	OPC (diameter of photoconductor : ø30mm)
Record method	Electrophotograph (laser)
Development method	Dry-type dual-component magnetic brush development
Charge method	Charged saw-tooth method
Transfer method	Transfer roller
Cleaning method	Cleaner blade
Fusing method	Heat roller
Used toner disposal	Toner recycling system

(4) Engine resolution

Resolution	Write :600dpi
Smoothing	Write :1200dpi equivalent
Gradation	Write :2 levels

(5) Printable area

The print area of this product is shown below.



If a printer driver for Windows or Macintosh is used for printing, the printable area will be smaller. The actual printable area depends on the printer driver to be used.

(in mm)

Paper size	A	B	C	D	E
A3	297	420	4	289	4
B4	257	364	4	242	4
A4	210	297	4	202	4
B5	182	257	4	168	4
A5	148	210	4	140	4
Japanese postcard	100	148	4	92	4
Ledger	279	432	4	271	4
Legal	216	356	4	208	4
Foolscap	216	330	4	208	4
Letter	216	279	4	208	4
Executive	184	267	4	183	4
Invoice	140	216	4	132	4
Com-10(envelope)	105	241	4	97	4
C5(envelope)	162	229	4	154	4
Monarch(envelope)	98	191	4	90	4
DL(envelope)	110	220	4	102	4
ISO B5(envelope)	176	250	4	168	4

(6) Warm-up

Warm-up time	less than 80 seconds
Pre-heat requirement	Required
Jam recovery time	Target: about 30 seconds (Under standard condition of 60 seconds left after side cover opening, polygon motor halt)

(7) Power source

Voltage	100V system
	100-127V
Frequency	50/60Hz

(8) Power consumption

Max. Power consumption.	1440W(When MFP full system)
-------------------------	-----------------------------

(9) Energy Star benchmark

Low power mode	30W or below
Transition time to low power mode	30min

(10) Noise

At working	less than 6.8B
At waiting mode	less than 5.0B

* Showing noise benchmark in each model as a whole system.

(11) Dimensions

External dimensions (WxDxH)	428x552x469 (Only main unit) (mm) 16.9"x21.7"x18.5"
Occupied space dimensions (WxD)	963x685 (mm) *1 25.7"x22.3"
Weight	AR-M280U:Approx.38.9kg (including developing unit/process/ each controller) Approx.99kg *1 AR-M280N:Approx.39.9kg (including developing unit/process/ each controller/NIC) Approx.100kg *1

*1: With B/W scanner module/DSPF, Scanner rack, Large capacity paper feed desk, Power supply unit and Upper exit tray extension

B. Document Feeding Equipment

(1) One-drawer tray (included in the base engine)

Paper feed method	One-drawer tray	
Sizes to be fed	A4, B5, 8.5" x 11"	
Paper capacity	500 sheets (at 80g/m ²)	
Media available for paper feeding	Plain paper 60 - 105g/m ² , 16 - 28lbs	
Paper type	Plain, recycled, pre-printed, pre-punched, color, letter head	
Paper size switching	To be switched by user (paper size to be entered from the operation panel).	
Dehumidification heater	Not provided	
Balance detection	Provided (paper empty and 3 steps)	
Default size setting	100V system	200V system
	8.5" x 11"	A4
Mounting/dismounting of the tray	Provided	

C. Output Equipment

(1) Face-down Exit Tray (included in the base engine)

Output position/method	Face-down output at the upper side of main unit
Output paper capacity	400 sheets (80g/m ² sheet)
Output paper size	A3, B4, A4, A4R, B5, B5R, A5R 11" x 17", 8.5" x 14", 8.5" x 13", 8.5" x 11", 8.5" x 11" R, 5.5" x 8.5" R Executive, postal card, Monarch (98 x 191) Com-10 (105 x 241), DL (110 x 220), C5 (162 x 229), ISO B5 (176 x 250)
Spec of media for paper output	Tracing paper : 52 ~ 59g/m ² / 14 ~ 15lbs Plain paper : 60 ~ 128g/m ² / 16 ~ 34lbs Index paper : 176g/m ² / 47lbs Cover paper : 205g/m ² / 54 ~ 55lbs Transparency film
Remaining paper detection	Not provided
Exit tray full detection	Provided

2. Specific Function

A. Printer Function

(1) Platform

IBM PC/AT (Include compatible machine)
Macintosh (680x0), Power Macintosh, iMac, G3Macintosh

* For Macintosh OS, the PS3 expansion kit and NIC card are required.

(2) Support OS

Custom PS	Windows 95/98/Me/XP
	Windows NT 4.0
	Windows 2000
Custom PCL5e/6(XL)	Windows 95/98/Me/XP
	Windows NT 4.0
	Windows 2000
SPDL	Windows 95/98/Me/XP
	Windows NT 4.0
	Windows 2000
	Mac OS 8.5.1 - Mac OS 9

* For Macintosh OS, the PS3 expansion kit and NIC card are required.

(3) PDL emulation

PCL6, PCL5e compatible, PostScript Level 2, PostScript 3 compatible (PS3 expansion kit is required.)
--

(4) Print Function

a. General

When an optional PS3 expansion kit is installed				
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Copies	1 - 999	1 - 999	1 - 999	1 - 999
Orientation	Yes	Yes	Yes	Yes
Duplex print	Yes	Yes	Yes	Yes
Saddle stitch	Yes	Yes	No	N/A
Binding edge	Left/top/ right	Left/top/ right	Long/short	Long/short
N-up	2/4/6/8	2/4/6/8	2/4*3*4	2/4/6/9/16
N-up direction	Fixed	Fixed	Fixed	Selectable
N-up border line	Yes	Yes	Yes(always)	Yes

b. Paper input

When an optional PS3 expansion kit is installed				
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Paper size	Yes	Yes	Yes	Yes
Custom paper size	1 size	1 size	3 sizes*3*5	N/A
Source selection	Yes	Yes	Yes	Yes
Different first page	Yes	Yes	N/A	Yes
Transparency inserts	Yes	Yes	N/A	Yes

c. Paper output

When an optional PS3 expansion kit is installed				
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Output tray selection	Yes	Yes	Yes	Yes
Mail bin	Yes	Yes	Yes	Yes
Staple	Yes	Yes	Yes	Yes
Offset	Yes	Yes	Yes	Yes
Punch	Yes	Yes	Yes	Yes

d. Graphic

When an optional PS3 expansion kit is installed				
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resolution	600/300 dpi	600 dpi	600 dpi	600 dpi
Halftone	N/A	Yes	Yes	N/A
Graphic mode	Yes	N/A	N/A	N/A
Smoothing	Yes	Yes	Yes	Yes
Toner save	Yes	Yes	Yes	Yes
Photo enhancement	Yes*8	Yes	N/A	N/A
Negative image	N/A	Yes	Yes	Yes
Mirror image	N/A	Horizontal/ vertical	Horizontal	Yes
Zoom	N/A	N/A	Yes	Yes
Fit to page	Yes	Yes	N/A	N/A

e. Font

When an optional PS3 expansion kit is installed				
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resident font	45 fonts	136 fonts	136 fonts*6	35 fonts
Download font	Bitmap TrueType, Graphic	Bitmap Type1 TrueType	Bitmap Type1 TrueType	N/A

f. Others

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Watermark*7	Yes	Yes	Yes	Yes
Overlay	Yes	Yes	N/A	N/A
Job retention*1	Yes	Yes	N/A	Yes
Account control	Yes	Yes	N/A	Yes
Custom settings	Yes	Yes	N/A	N/A
Automatic configuration*2	Yes	Yes	N/A	Yes
Job end notification	Yes	Yes	N/A	N/A

* 1 For models without a hard disk drive, an optional hard disk drive (AR-HD3) must be installed.

* 2 Functions when peripheral devices are installed.

* 3 Not supported in the Windows NT 4.0 environment.

* 4 2/4/6/9/16 is supported in the Windows 2000 environment.

* 5 Only one size is supported in the Windows 2000 environment.

* 6 Only 35 fonts are supported in the Windows NT 4.0 environment.

* 7 This function is limited for PPD.

* 8 PCL6 only

(5) Compatibility

PCL 5e compatibility	Target for PCL5e is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PCL commands are not necessarily included in the compatibility.
PCL6 compatibility	Target for PCL6 is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PCL commands are not necessarily included in the compatibility.
PostScript Compatibility	Roman PostScript is targeted to be compatible with Adobe PostScript as performed in HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.

B. Expanded RAM

Installation of additional RAM will provide the following:

- 1) Time out error reduction
- 2) Spool time reduction
- 3) Avoidance of Virtual Memory (VM) error / memory full

Use commercially available RAM with the following specifications.

Note: If RAM used does not meet the follow specifications, the copier may not recognize the additional RAM or its capacity correctly.

<Specification>

DIMM TYPE	168pin 3.3V Unbuffered SDRAM DIMM Non-ECC
DIMM capacity	64MByte, 128MByte, 256MByte
CAS LATENCY	CL=2
SDRAM CLOCK	For PC100, PC133
SPD	Supporting
Parity	Not support
ECC	Not support

<Operation-assured Memory> (As of March / 2001)

Manufacture	Capacity	Model name	RAM CHIP name	Note
Kingston Technology	128MB	KVR133X64C3/128	HYB39S64800BT-7.5	
	128MB	KVR133X64C3-128	D456821G-A75-9JF	
	256MB	KVR133X64C3-256	HY57V28820AT-H	
Viking Components	64MB	VIK8641CL2	μPD456841G5-A80-9JF	
	64MB	VIK8641CL2	D456841G5-A80-9JF	
	128MB	VIK6642CL2	TC59SM708FT-80	
	128MB	VIK6642CL2	D4564841G5-A80-9JF	
	256MB	VIK2642CL2	TC59SM708FT-80	
Memory Card Technology	64MB	DM864VS65804X-7G	GM72V66841XT75	
	128MB	DM1665VS65804X-7G	HY57V64820HG	

C. Scanner function

*Scanner function, the NIC card and Network Scanner kit are required.

(1) Scanner function

Scanner mode	Scan to E-mail (Internet FAX) Scan to Server (Client PC)
--------------	---

(2) Support System

Embedded server	SMTP server FTP server
Protocol	TCP/IP

(3) Support Image

Format	TIFF, PDF, TIFF-F * Selectable for each page
Compression method	Uncompressed, G3(1-dimension) *1, G4 *2 *1 G3 (1-dimension) = MH (Modified Huffman) *2 G4 = MMR (Modified MR)

(4) Transmission Mode

DSPF/OC transmission switching	Available (Switching during the reading is not possible)
--------------------------------	---

(5) Image Process

Half tone reproduction	Equivalent to 256 levels
Exposure adjustment	Light / Auto / Dark
Quality selection	Half-tone ON/OFF
Resolution*	Normal (200x200dpi) Fine (300x300dpi) Super fine (400x400dpi) Ultra fine (600x600dpi) Varies with the file type/transmission method

(6) Original Memory

Standard	Commonly use ERDH area of memory.
Memory expansion	Special : As per ERDH memory

(7) Specified Destination

Specified destination	Specifying by one-touch or group
One-touch*	Max. 500 destinations (in conjunction with the one-touch dial of FAX) Max. 100 destinations can be registered for FTP and Desktop.
Group*	To be registered in one-touch
Program	Available

(8) Specified Multiple Destinations

Specified destination	Specifying by one-touch or group
No. of registration	Max. 300 items (in conjunction with those of FAX)
Sequential broadcasting	Available (E-mail only. It is not available for FTP/Desktop.)
Simultaneous FAX transmission	Available (Specifying multiple destinations of FAX, E-mail or FTP and broadcasting by a single scan)

O : Available

(9) Functions

Transmitting functions	Rotating transmission	Available (to be matched with FAX specification)
	Long length original transmission	Not Available
	Verification stamp function	Option
Report/list functions	Transmit/receive record	Available
	Transmit/receive result	Available
	Address/phone directory list	Available
	Group list	Available
	ID/sender list	Available
	Program list	Available

D. Copy function

(1) Copy Speed

	Actual	Reduction	Enlargement
A4, 8.5"x11"	28	28	28
A4R, 8.5"x11"R	20	20	20
A5R, 5.5"x8.5"R, Invoice-R	28	28	28
B5	28	28	28
B5R, Exective-R	20	20	20
B4, 8.5"x14"	16	16	16
A3, 11"x17"	14	14	14
Extra, Envelope	14	14	14
Japan P/C	When printing on post cards, engine speed can vary with system configuration, because each card is fed only after the previous card exits machine.		

* Figures in reduction/enlargement are represented by those at the ratio to show slowest speed

(2) First Copy Time

Conditions: A4 or 8.5"x11"P from front tray of PPC, without HDD and with polygon motor running.

Document glass *1	Less than 5.3 seconds
DSPF	Less than 6.0 seconds

*1 During OC/high-speed mode

(3) Job Speed

S → S *1	27 cpm (97%)
S → D *2	26 cpm (92%)
D → D *3	26 cpm (92%)

*1 S → S : A4 / 8.5" x 11"P original 5 sheets copy 5sets

*2 S → D : A4 / 8.5" x 11"P original 10 sheets copy 5sets

*3 D → D : A4 / 8.5" x 11"P original 5 sheets (10 pages) copy 5sets

Note: First copy time has been factored into calculation resulting in reduced CPM.

(4) Continuous Copy

Max. multiple number	999 pages
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(5) Copy Ratio

Copy ratio	AB series : 25%, 70%, 81%, 86%, 100%, 115%, 122%, 141%, 400% Inch series : 25%, 64%, 77%, 100%, 121%, 129%, 400%
Zoom	25 - 400% 25 - 200% (Copy from DSPF)
Independent scaling	Not provided

(6) Exposure/Copy Quality Process

Exposure mode	Binary: Text(auto/manual), Text/photo, Photo 256 levels: Not provided
Manual steps	9 steps
Smoothing	Standard
Toner save mode	Standard

(7) Copy Function

Function	APS	Standard Function
	AMS	Standard Function
	Paper type select	Standard Function (By type setting)
	Auto tray switching	Standard Function
	Rotation copy	Standard Function
	Electronic sort	Standard Function
	Rotation sort	Not provided
	Reserved copy	Standard Function
	Prior tray setting	Not provided
	Recall/register of program	Standard Function
	Proof copy	Not provided
	Preheat function	Standard Function (To be set up by key operator)
	Auto power shut-off function	Standard Function (To be set up by the key operator program)
	Account control	Standard Function (100 accounts)
	Communication support (RIC)	Standard Function
	Card counter support	Only provided the connector
	Coin vendor support	Only provided the connector
Special function	Margin shift	Standard Function
	Edge erase / Center erase	Standard Function
	Dual page copying	Standard Function
	Covers	Not provided
	Transparency insert	Not provided
	Centering	Not provided
	Multi shot (N in 1)	Standard Function (2 in 1 / 4 in 1)
	Pamphlet copy	Standard Function
	2-sided copy orientation change	Standard Function
	Large capacity original mode	0 (Max. 140 pages)
	B/W reverse	Not provided
	Shading	Not provided
	Mirror image	Not provided
	Repeat	Not provided
	Date stamp	Not provided
	Stamp	Not provided
	Page stamp	Not provided
	Zaurus print	Not provided

[5] CONSUMABLE PARTS

1. Supply system table

Note: The consumable parts are the same as those of the AR-M350/M450 series and the AR-P350/P450.

A.USA

NO	Name	Content	Life	Product name	Remark
1	Toner (Black)	Toner(Toner : Net Weight 814g)	27K	AR-450NT (*1 AR-450NT-J)	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	80K	AR-450ND	
3	Drum	Drum	80K	AR-451DR	
4	Maintenance kit 1	Cleaner blade Drum separation pawl Screen grid Toner reception seal Side molt F Side molt R Charging plate	x1 x4 x1 x1 x1 x1 x1	80K *2 AR-450KC1	
5	Maintenance kit 2	Transfer roller Discharging plate Paper dust removing unit DV blade DV side seal F DV side seal R	x1 x1 x1 x1 x1 x1	80K AR-450KA1	
6	Upper heat roller kit	Upper heat roller Fusing separation pawl (Upper)	x1 x4	160K AR-450UH	
7	Lower heat roller kit	Lower heat roller Fusing separation pawl (Lower)	x1 x2	160K AR-450LH	
8	Cleaner blade	Cleaner blade	x10	80K*2(x10) AR-450CB	Available in the National Parts Center
9	Cleaning roller	Cleaning roller Bearing	x10 x20	160K(x10) AR-450CR	Available in the National Parts Center
10	Staple cartridge	Staple cartridge	x3	3000x3 AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
11	Staple cartridge	Staple cartridge	x3	5000x3 AR-SC2	Common with cartridge for AR-FN7

*1: For USA

*2: Equivalent to the drum life.

Note1: Print on Master/individual carton:Toner/Developer in 2 languages (English/French), DR in 4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 80K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

2. Production number identification

A. Drum cartridge

The lot number, printed on the front side flange, is composed of 10 digits, each digit showing the following content:

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- 1 Number
For this model, this digit is 2.
- 2 Alphabet
Indicates the model conformity code. S for this model. (100K/80K drum)
- 3 Number
Indicates the end digit of the production year.
- 4 Number or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.
- 5/6 Number
Indicates the production day on the month.
- 7 Number or X, Y, Z
Indicates the month of packing.
X stands for October, Y November, and Z December.
- 8/9 Number
Indicates the day of the month of packing.
- 10 Alphabet
Indicates the production factory. "A" for Nara Plant.

B. Toner cartridge

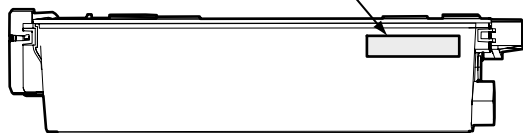
The lot number is composed of 7 digits, and each digit indicates as following.

The lot number shall be printed in the position shown below.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

- 1 Version number (A - sequentially revised)
- 2 Numeral figure
Indicates the end digit of the production year.
- 3 Alphabet
Indicates the production factory. (B for SOCC)
- 4 Destination code
- 5,6 Numeral figures
Indicates the production day.
- 7 Numeral figure or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.

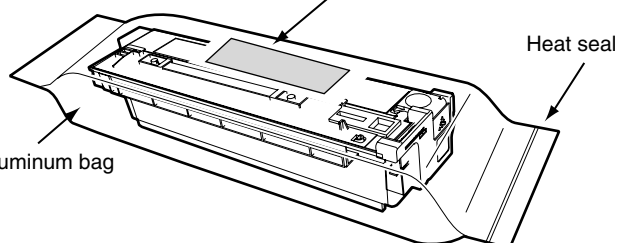
Lot No. Location



Lot No. Location

Heat seal

Aluminum bag



C. Developer

The lot number is composed of 8 digit, and each digit indicates as following.

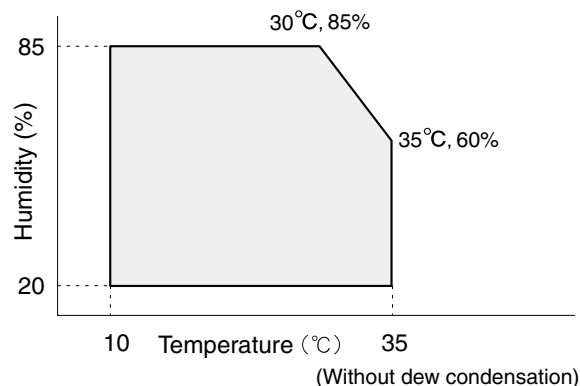
The lot number shall be printed on the bag.

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

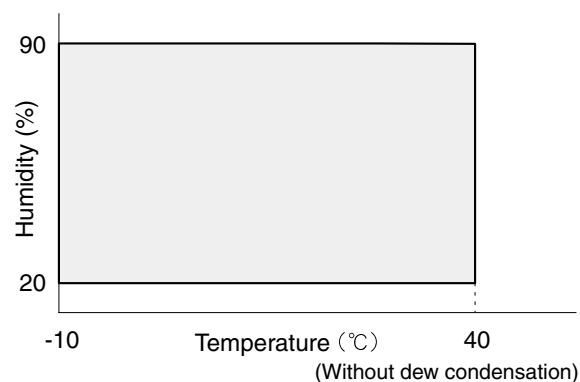
- 1 Alphabet
Indicates the production factory.
- 2 Figure
Indicates the production year.
- 3/4 Figure
Indicates the production month.
- 5/6 Figure
Indicates the production day.
- 7 Hyphenation
- 8 Figure
Indicates the production lot.

3. Environmental conditions

A. Operating conditions

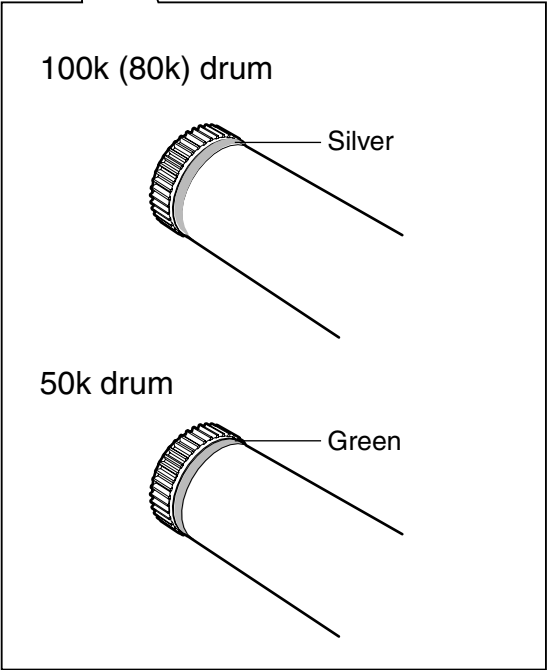
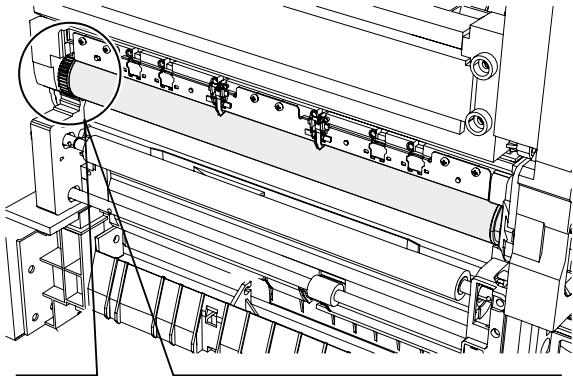
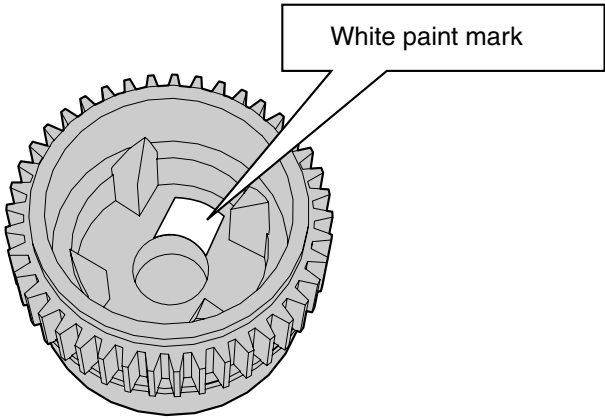


B. Storage conditions



4.Different point of 50K drum and 80K drum

		50K drum	80K drum
1	Marking	No mark on Flange	White paint mark on rear side of Flange
2	Lot number	2 digit : [T]	2 digit : [S]
3	Flange assembly direction	Painting upper limit : F side	Painting upper limit : R side
4	Color band on Drum	Green	Silver



[6] UNPACKING AND INSTALLATION

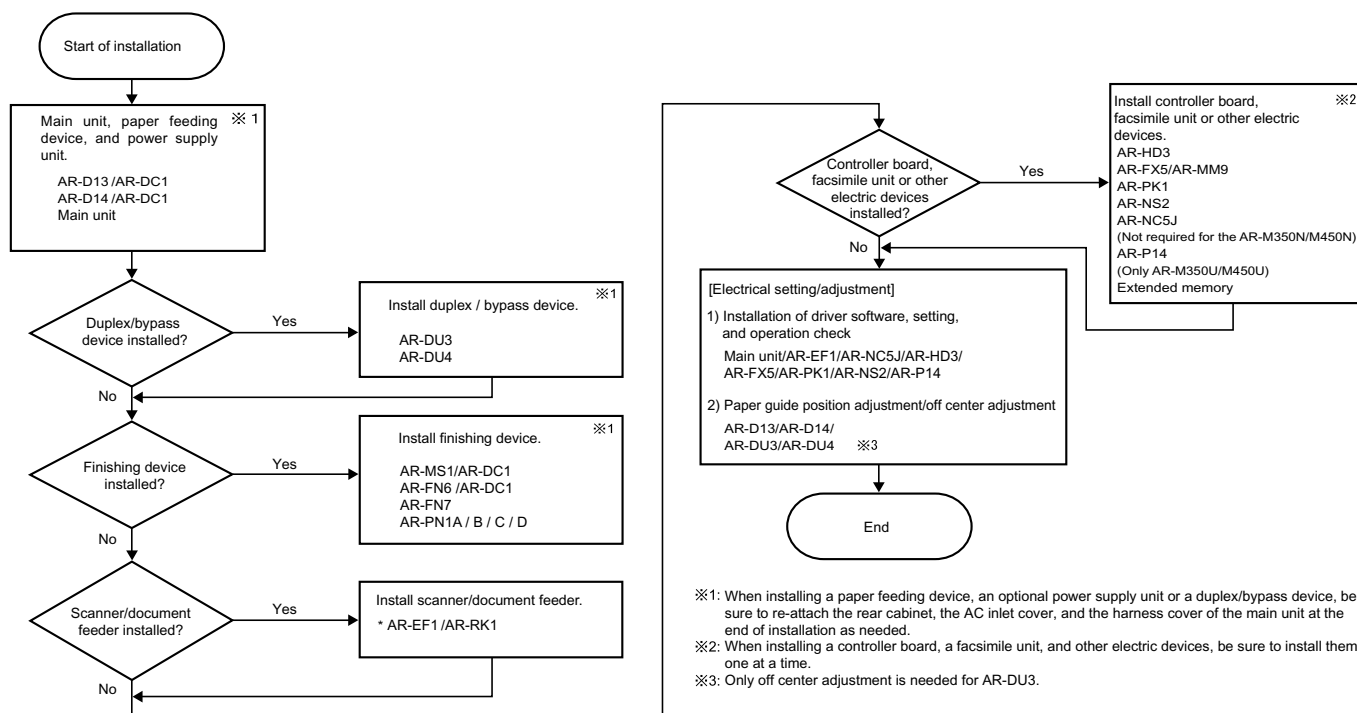
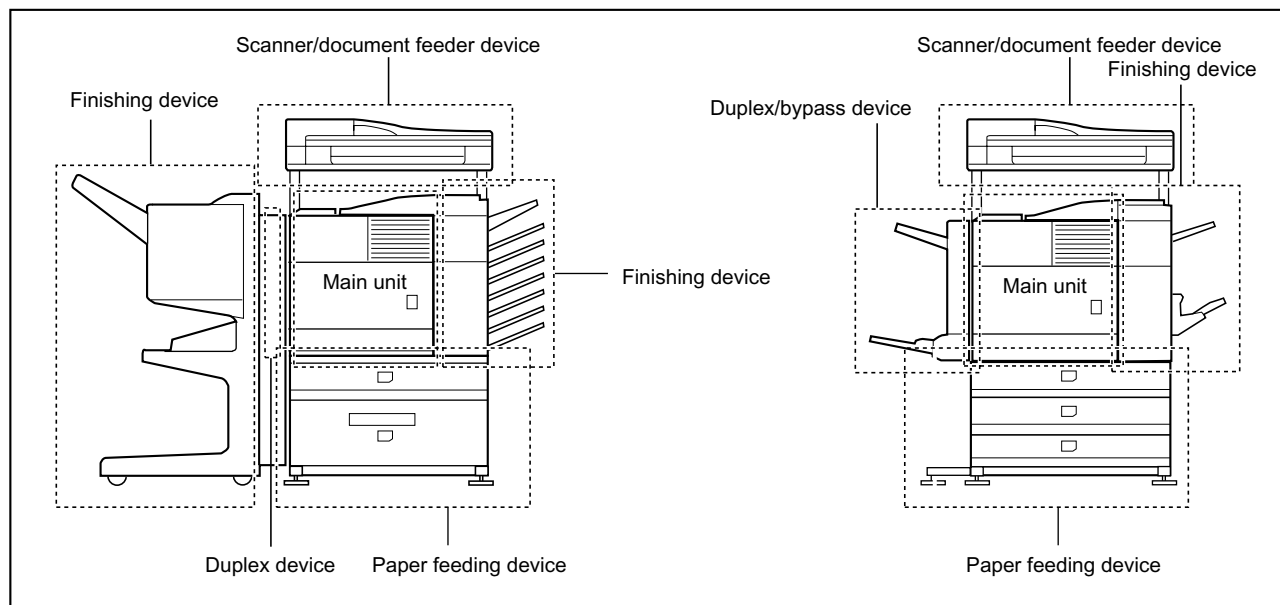
1. Installing procedure flowchart

There are many combinations between this machine and option units. For installing option units, observe the following procedures for efficiency.

To install the devices efficiently, follow the procedure below.

Some peripheral devices may have been installed as standard devices depending on the main unit model.

Part of descriptions and illustrations may be different.

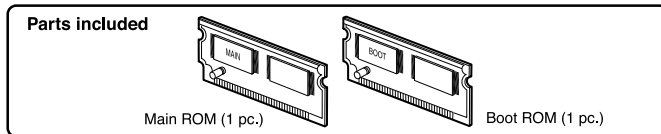


* When installing an option, refer to the Service Manual for that option and or the AR-M350 / M450 Service Manual.

2. AR-P14 installing procedure

<Before installation>

- * This installation procedure is provided for use with the AR-M280U / M280N and AR-M350U / M450U series.
- * To connect this machine to a network, a Print Server Card (NIC) AR-NC5J must be installed to the multi-function controller board in advance.



- * To enable the printer expansion function, the product key must be acquired.

The application number, machine serial number, and product key number are important information. Keep the above information for future reference.

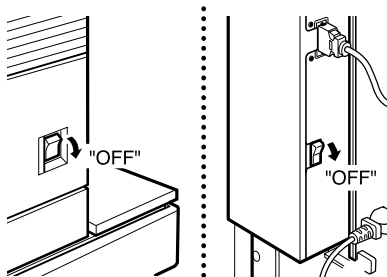
1) Mount the printer expansion kit ROMs to the control PWB.

<1>Turn off the main switch of the main unit of the printer

Turn the main switch located on the front side of the main unit to the "OFF" position.

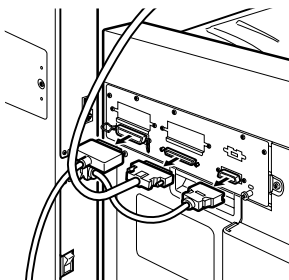
If the machine is equipped with a facsimile unit, also turn off the FAX power switch.

Then remove the power plug from the outlet.



<2>Remove the cables connected to the control PWB unit.

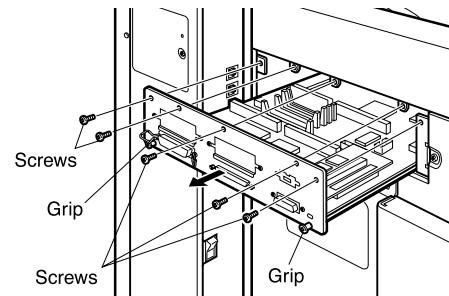
Remove all the cables connected to the control PWB unit of the main unit of the printer.



<3>Remove the control PWB unit.

Remove the five screws that fix the control PWB unit to the main unit of the printer.

Then, hold the two grips and pull out the control PWB unit to remove it from the main unit.

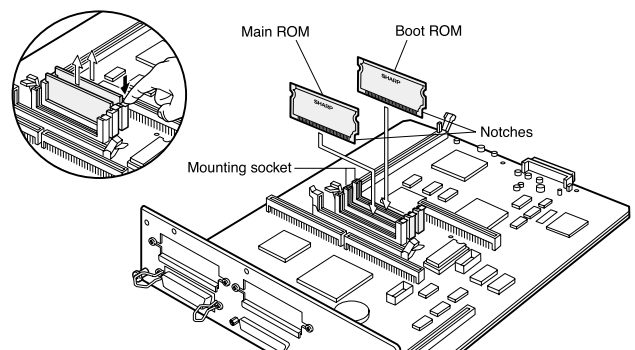


<4>Mount the printer expansion kit ROMs(2 pcs.)to the control PWB.

Remove the ROMs(main and boot ROMs)from the control PWB and replace them with the two ROMs(main and boot ROMs)of the printer expansion kit.

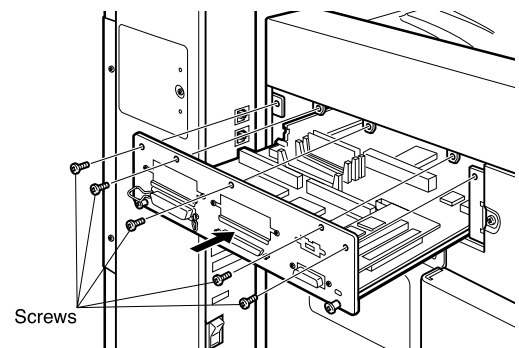
The main and boot ROMs are indicated with "MAIN" and "BOOT" on the labels on the ROMs respectively.

When mounting the printer expansion kit ROMs, insert them to the same positions in the same direction as those before replacement and ensure that the inserted printer expansion kit ROMs are locked with the fittings of the sockets.



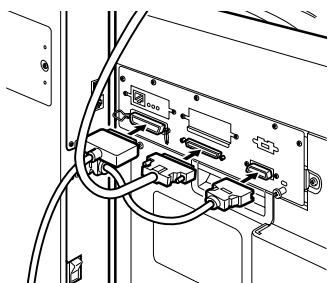
<5>Re-attach the control PWB.

Attach the control PWB to the main unit of the printer and fix it using five screws.



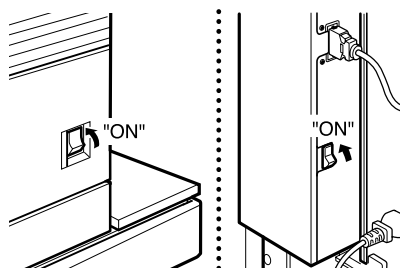
<6> Connect the cables to the control PWB.

Connect all the cables that have been removed in <2> to the original positions of the control PWB unit.



If another peripheral device must be installed, carry out the following steps at the end of the installation work.

2) Turn on the main switch of the main unit of the printer.
Insert the power plug of the main unit of the printer to the outlet.
Then, turn the main switch located on the front side of the main unit to the "ON" position.
If the machine is equipped with a facsimile unit, turn on the FAX power switch.



3) Prepare to enable the printer expansion function.

To enable the printer expansion function, use the keys on the operation panel to enter the product key.

For entry of the product key, see the key operator's guide of the operation manual for the main unit.

Carry out the network setting for the Print Server Card.

Use a key operator program to carry out the network setting for this machine. For this network setting, the customer's network environment must be checked. Consult the network administrator to carry out the setting.

In addition to the network setting for this machine, to use the machine in the network environment:

According to the customer's network environment, install the driver software from the CD-ROM supplied with this machine and use the utility software supplied with the Print Server Card to set the network printer for the server computer.

For installation in the server computer and network setting, see the operation manual supplied with the main unit.

This setting must be carried out by the network administrator or based on consultation with the network administrator.

4) To check the operation of the printer expansion function.

When the network settings and the driver settings are complete, perform a test print to check if printing can be performed successfully.

(When test printing is completed successfully, use the "list print" key operator program to print the network settings and keep the printout for future reference.)

Installation of AR-P14 is now complete.

[7] MAINTENANCE

1. Self print of set values

Use SIM 22-6 to print the set values (machine settings) and jam history.
These values must be printed before execution of maintenance or disassembly procedures.

2. Maintenance System Table

The maintenance items and positions are the same as those of the AR-M350 series. However, the maintenance cycle differs.

A. Scanner / DSPF

Maintenance cycle : 80K

X Check (Clean, replace, or adjust as necessary.) O Clean ▲ Replace △ Adjust ☆ Lubricate □ Move position

Unit name	Part name		When calling	80k	160k	240k	320k	Remark
Optical section	Mirror/Lens/Reflector/Sensors		O	O	O	O	O	
	Table glass/OC		O	O	O	O	O	
	White reference sheet		O	O	O	O	O	
	Rails			☆	☆	☆	☆	
	Drive belt/Drive wire/Pulley			X	X	X	X	
DSPF	Paper feed section	Take-up roller	O	▲	▲	▲	▲	Note 1
		Separation pad	O	▲	▲	▲	▲	Note 1
		Paper feed roller	O	▲	▲	▲	▲	Note 1
	Transport section	PS roller	O	O	O	O	O	
		Exposure section (Dust-proof glass)	O	O	O	O	O	
	Paper exit section	Paper feed roller SPF	O	O	O	O	O	
	Other	Sensors		O	O	O	O	For cleaning, blow air.
	Finish stamp section [Option] (Japan only)	Stamp solenoid					▲	
		Stamp individual part	X	X	X	X	X	User replacement at 10K or 1 year.

Note 1: Replacement reference: Same as above or 2 years.

B. Engine section

* For disassembly procedures, refer to the AR-P350/P450 Service Manual.

Maintenance cycle : 80K

O Check (Clean, replace, or adjust as necessary.)

X Clean

▲ Replace

△ Adjust

☆ Lubricate

□ Move position

Unit name	Part name	When calling	80k	160k	240k	320k	Remark
Drum peripheral	Drum		▲	▲	▲	▲	Installed when shipping
	Cleaner blade		▲	▲	▲	▲	
	Toner reception seal		▲	▲	▲	▲	
	Side molt		▲	▲	▲	▲	
	Transfer roller	X	▲	▲	▲	▲	
	Discharge plate	X	▲	▲	▲	▲	
	TR bearing (F/R)		X	X	X	▲	
	After-transfer star ring		X	X	X	▲	
	TR gear	X	X	▲	X	▲	
	Screen grid	(O)X	▲	▲	▲	▲	
	Drum separation pawl UN		▲	▲	▲	▲	
	Charger case (M/C)		O	O	O	O	
	Charging plate (saw teeth)	(O)X	▲	▲	▲	▲	
Developing section	Developer		▲	▲	▲	▲	Supplied when installing
	DV blade		▲	▲	▲	▲	
	DSD collar		O	O	O	O	
	DV side seal F		▲	▲	▲	▲	
	DV side seal R		▲	▲	▲	▲	
	Toner cartridge						Attached when installing./ EX Japan: 814g, user replacement for every 27K.
Fusing section	Upper heat roller		O	▲	O	▲	
	Lower heat roller		O	▲	O	▲	
	Upper separation pawl		X	▲	X	▲	
	Lower separation pawl		X	▲	X	▲	
	Thermistor		X	X	X	X	Clean and remove paper dust.
	Upper heat roller gear		X	▲	X	▲	
	Paper guides	O	O	O	O	O	
	Gears		☆	☆	☆	☆	
	Cleaning roller		X	▲	X	▲	
	CL roller collar			▲		▲	
Filters	Ozone filter		▲	▲	▲	▲	
Paper feed section	Paper feed roller	O	X	X	X	X	Note 2
	Torque limiter	X	X	X	X	X	Note 2
Transport section	PS follower roller	O	O	O	O	O	
Paper exit reverse section	Transport rollers	O	O	O	O	O	
	Transport paper guides	O	O	O	O	O	
	Paper dust remover		▲	▲	▲	▲	
Drive section	Gears	☆	☆	☆	☆	☆	(Specified position)
	Belts				X		
Image quality		X	X	X	X	X	
Other	Sensors		X	X	X	X	

Note 2: Replacement reference: Use the counter value of each paper feed port as the replacement reference.

Paper feed roller/Torque limiter section: 80K or 2 years

C. Peripheral devices

Maintenance cycle : 80K

O Check (Clean, replace, or adjust as necessary.)

X Clean

▲ Replace

△ Adjust

☆ Lubricate

□ Move position

Option name	Part name		When calling	80k	160k	240k	320k	Remark
ADU + Manual feed	Paper feed separation section	Paper feed rollers	(O)X	X	X	X	X	Note 3
		Separation pad	(O)X	X	X	X	X	Note 3
		Torque limiter	(O)X	X	X	X	X	Note 3
	Transport section	Transport rollers	O	O	O	O	O	
		Transport paper guides	O	O	O	O	O	
	Drive section	Gears	☆	☆	☆	☆	☆	(Specified position)
		Belts				X		
	Other	Sensors	X	X	X	X	X	
Desk (Multi stage LCC) Multi purpose	Paper feed separation section	Paper feed rollers	(O)X	X	X	X	X	Note 3
		Torque limiter	(O)X	X	X	X	X	Note 3
	Transport section	Transport roller	O	O	O	O	O	
		Transport paper guides	O	O	O	O	O	
	Drive section	Gears	☆	☆	☆	☆	☆	(Specified position)
		Belts				X		
	Other	Sensors	X	X	X	X	X	
Finisher	Transport section	Transport rollers	O	O	O	O	O	
		De-curler roller	(O)X	X	X	X	X	
		Transport paper guides	O	O	O	O	O	
	Drive section	Gears	☆	☆	☆	☆	☆	(Specified position)
		Belts				X		
	Other	Sensors	X	X	X	X	X	
		Discharge brush	X	X	X	X	X	
	Staple unit							Replace Unit at 100K staple.
Mail-bin stacker	Staple cartridge							User replacement for every 3000pcs.
	Transport section	Transport roller	O	O	O	O	O	
		Transport paper guides	O	O	O	O	O	
	Drive section	Gears	☆	☆	☆	☆	☆	(Specified position)
		Belts				X		
	Other	Sensors	X	X	X	X	X	
		Discharge brush	X	X	X	X	X	
Saddle finisher	Transport section	Transport roller	O	O	O	O	O	
		Transport paper guides	O	O	O	O	O	
	Drive section	Gears	☆	☆	☆	☆	☆	(Specified position)
		Belts				X		
	Other	Sensors	X	X	X	X	X	
		Discharge brush	X	X	X	X	X	
	Staple Unit							Replace Unit at 100K staple (including the staple UN and the holder section).
	Staple cartridge							User replacement for every 5000 pcs.

Note 3: Replacement reference: Use the counter value of each paper feed port as the replacement reference

Paper feed roller / Torque limiter section: 80K or 2 years

[8] ADJUSTMENTS

1. Process section

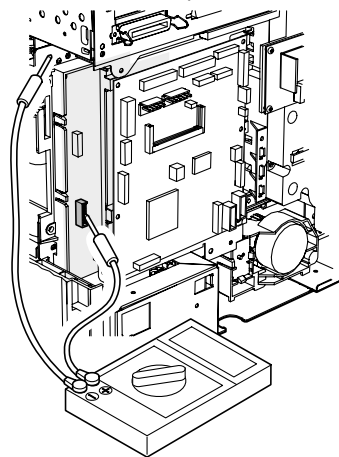
A. High voltage output adjustment

(1) Developing bias output check and setup

- 1) Remove the rear cabinet to allow checking of the high voltage monitor output pin.
- 2) Execute the simulation of the target high voltage.
(See the table below.)
- 3) Select the mode to be set with 10-key, and press START key.
- 4) Enter the set value with 10-key and press START key. The set value is outputted for 30 sec.
- 5) Apply a high voltage tester between the measurement pin and the frame.

Note: Take care not to short the measuring pin to the frame.

- 6) The unit stops after 30 sec of output.



			Default		Set range	Measurement pin	High voltage probe impedance
			Monitor output voltage	Set value			
MC grid MAIN GRID (SIM 8-2)	AUTO	AE mode	-650V±5V	645	200~900	CN2-7	100MΩ
	CHARACTER	Text mode	-650V±5V	645	200~900		
	MIX	Text/Photo mode	-650V±5V	645	200~900		
	PHOTO	Photo mode	-650V±5V	645	200~900		
	PRINTER	Printer mode	-650V±5V	645	200~900		
	FAX	Fax mode	-650V±5V	645	200~900		
Transfer current THV+ (SIM 8-6)	FRONT	Front		45PPM : 267 28/35PPM : 220	0~620		
	BACK	Back		45PPM : 310 28/35PPM : 267	0~620		
Developing bias DV BIAS (SIM 8-1)	AUTO	AE mode	-500V±5V	485	0~745	CN2-1	100MΩ
	CHARACTER	Text mode	-500V±5V	485	0~745		
	MIX	Text/Photo mode	-500V±5V	485	0~745		
	PHOTO	Photo mode	-500V±5V	485	0~745		
	PRINTER	Printer mode	-500V±5V	485	0~745		
	FAX	Fax mode	-500V±5V	485	0~745		
	PLUS	Positive bias	+150V±5V	150	0~255		
Separation voltage SHV (SIM 8-17)	FRONT	Front	+1.25V±0.1V	45PPM : 160 28/35PPM : 120	0~375	CN2-3	10MΩ
	BACK	Rear	+1.25V±0.1V	45PPM : 160 28/35PPM : 120	0~375		
Transfer voltage THV (SIM 8-17)			-800V±10V	780	0~1250	CN2-5	10GΩ

2. Engine section

A. Resist quantity setup

- This adjustment requires a high level of accuracy.
We recommend using the default setting.

This adjustment is performed in the following cases:

- When the void quantity is changed by the paper feed tray.
- When paper is skewed.

Complete the following adjustments before performing resist quantity setup.

- LSU right angle adjustment
- Print magnification ratio adjustment
- Print off-center setup
- Void area setup

- 1) Execute SIM 51-2.
- 2) Adjust the resist quantity so that paper transport is stable.

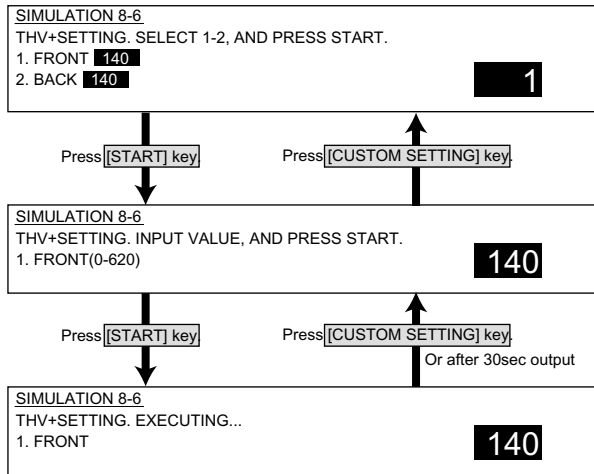
<Factory setup value>

45PPM	BPT	55
	T1	60
	T2	50
	DESK	50
	ADU	50
28/35PPM	BPT	60
	T1	65
	T2	55
	DESK	55
	ADU	55

[9] SIMULATION

The following simulations have been changed.

Main code 8	
8-6	
Purpose	Adjustment
Function (Content)	Used to check and adjust the transfer charger current and its control circuit.
Section	Process (OPC drum, developing, transfer, cleaning)
Item	
Operation/Procedure	Enter the output value to be adjusted with 10 digit key pad. The current set value is highlighted at the right of each item. After entering the value with 10 digit key pad, press START key. The output is made for 30sec at the set value. Then the output is stopped.

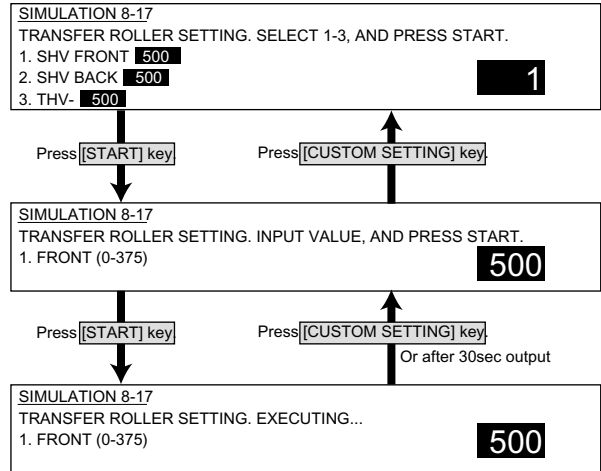


<List of display value>

			Default	Set range
1	Cassette/manual paper feed	45PPM	267	0 ~ 620
		28/35PPM	220	
2	Paper feed from ADU	45PPM	310	
		28/35PPM	267	

8-17

Purpose	Operation test, check
Function (Content)	Used to set and check the transfer roller output.
Section	Process (OPC drum, developing, transfer, cleaning)
Item	Operation
Operation/Procedure	Enter the output value to be adjusted with 10 digit key pad. The current set value is highlighted at the right of each item. After entering the value with 10 digit key pad, press START key. The output is made for 30sec at the set value. Then the output is stopped.



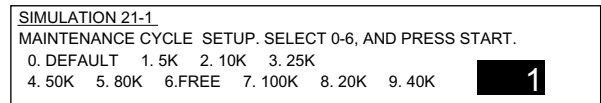
<List of set values>

		Default	Set range
1	SHV front surface	160(45PPM)	0 ~ 375
2	SHV back surface	120(28/35PPM)	
3	THV-output	780	0 ~1250

Main code 21

21-1

Purpose	Setup
Function (Content)	Used to set the maintenance cycle.
Section	
Item	Spec
Operation/Procedure	Used to set the maintenance cycle in an SRU machine.



<List of set values>

0	Maintenance display at the cycle of each control spec.
1	Maintenance display at 5K
2	Maintenance display at 10K
3	Maintenance display at 25K
4	Maintenance display at 50K
5	Maintenance display at 80K
6	No maintenance display
7	Maintenance display at 100K
8	Maintenance display at 20K
9	Maintenance display at 40K

Main code 44

44-1

Purpose	Setup
Function (Content)	Used to set Enable/Disable of each correction operation in the image forming (process) section.
Section	Process (OPC drum, developing, transfer, cleaning)
Item	Operation
Operation/Procedure	

SIMULATION 44-1
PROCESS CORRECTION VALUE SETTING. INPUT VALUE 0-255
AND PRESS START.
BIT0:Vg1, BIT1:Vg2, BIT2:Vb1, BIT3:Vb2
BIT4:Vb3, BIT5:LD1, BIT6:LD2
BIT7:EX

255

bit = 1 : Correction enabled

Bit	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	0	0	0	0	0	0	0	0	EX	LD2	LD1	Vb3	Vb2	Vb1	Vg2	Vg1

44-4

Purpose	Setup
Function (Content)	Used to set the target image (reference) density level in the developing bias voltage correction.
Section	Process (OPC drum, developing, transfer, cleaning)
Item	Data
Operation/Procedure	The process correction value is set. Select an item (1 - 9), and enter a value with 10 digit key pad. Press START to store the value.

SIMULATION 44-4
PROCESS CONTROL VALUE SETTING. SELECT 1-8 AND PRESS START.

1.PTH **00** 2.S-WT **100** 5.Vb1-3 **50** **1**
3.Vb1-1 **50** 4.Vb1-2 **50** 6.Vb2-1 **50** 7.Vb2-2 **50** 8.Vb2-3 **50**

Press [START] key.

Press [CUSTOM SETTING] key.

SIMULATION 44-4
PROCESS CONTROL VALUE SETTING. INPUT VALUE, AND PRESS START.
1.PTH **45**

<List of display values>

1	PTH *1	Process Thermistor temperature forcible set value (0-99°C : Normal 0)
2	S_WT *2	Vb (Developing bias correction value) rising correction wait time (0-180sec : Default 90)
3	Vb1-1 *3	Vb (Developing bias correction value) correction quantity (First rotation) 1 (0 - 150V : Default 50)
4	Vb1-2 *3	Vb (Developing bias correction value) correction quantity (First rotation) 2 (0 - 150V : Default 50)
5	Vb1-3 *3	Vb (Developing bias correction value) correction quantity (First rotation) 3 (0 - 150V : Default 50)
6	Vb2-1 *4	Vb (Developing bias correction value) correction quantity (Second rotation) 1 (0 - 50V : Default 15)
7	Vb2-2 *4	Vb (Developing bias correction value) correction quantity (Second rotation) 2 (0 - 50V : Default 15)
8	Vb2-3 *4	Vb (Developing bias correction value) correction quantity (Second rotation) 3 (0 - 50V : Default 15)

*1: Only when this value is 0, control is performed with the actual measurement value of process Thermistor.

If it is not 0, control is forcibly performed.

*2: When the drum motor standby time is greater than this value, the correction of SIM 44-1 Vb1 is performed.

*3: This value is SIM 44-9 Vb1-1 correction value. The value corresponding to the drum rotating time is used.

*4: This value is SIM 44-9 Vb1-2 correction value. The value corresponding to the drum rotating time is used.

DRUM ROTATION TIME			Vb1 correction value (X' th rotation)
45PPM	35PPM	28PPM	
0 ~ 40K (sec)	0 ~ 50K (sec)		(X' th rotation) -1
40 ~ 80K (sec)	50 ~ 95K (sec)		(X' th rotation) -2
80K ~ (sec)	95K ~ (sec)		(X' th rotation) -3

44-9

Purpose	Adjustment, setup, operation data output, check (display)
Function (Content)	Used to check the result (main charger grid voltage developing bias voltage, laser power, etc.) of correction (process correction) in the image forming section. (By this simulation, the correction operation can be checked.)
Section	Process (OPC drum, developing, transfer, cleaning)
Item	Data
Operation/Procedure	The process correction value is checked.

SIMULATION 44-9
PROCESS CONTROL DATA DISPLAY.
DRUM ROTATION TIME: **01234567** (sec)
Vg1: **30** (V) Vg2: **30** (V)
Vb1-1: **30** (V) Vb1-2: **30** (V) Vb2: **10** (V)
LD1: **0.05** (mW) LD2: **0.05** (mW)
CONTROL: **1** DESTINATION: **A** PTH: **30** (deg)
TO: **-5** T1: **-5** T2: **-3**

<List of display values>

DRUM ROTATION TIME	Drum rotation time
Vg1~Vg2	Grid voltage correction value
Vb1-1 *1	Vb (Developing bias correction value) correction value (first rotation)
Vb1-2 *1	Vb (Developing bias correction value) correction value (second rotation)
Vb2	Developing bias correction value
Vb3	Developing bias correction value
LD1	Laser power correction value
LD2	Laser power correction value
CONTROL	CRUM control spec (1 - 3)
DESTINATION	CRUM destination (A - L)
PTH *2	Process Thermistor temperature value
T0	Toner control correction value (Rotation time correction) (±100)
T1	Toner control correction value T1 (Temperature correction) (±100)
T2	Toner control correction value T2 (Temperature correction) (±100)

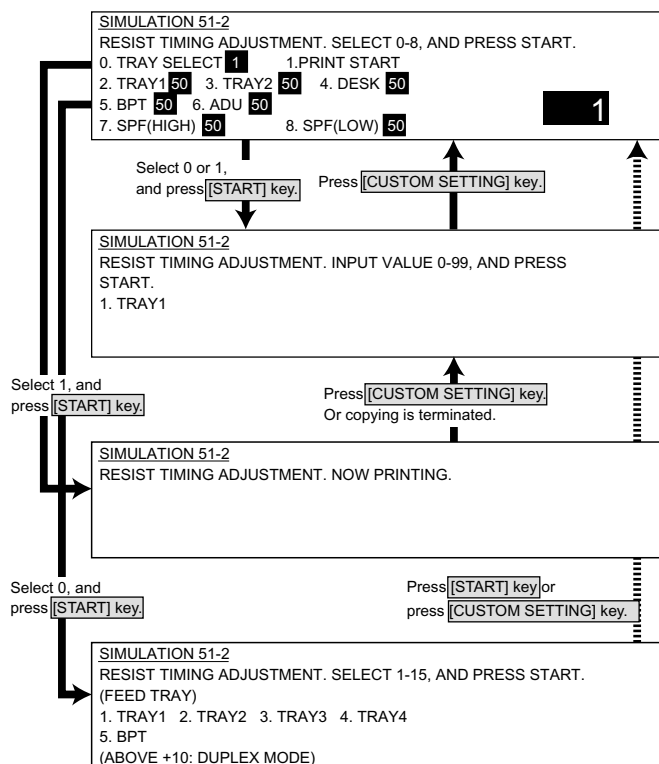
*1: Vb1-1 and Vb1-2 are enabled or disabled by SIM 44-1 Vb1 setup.

*2: When PTH is set to 0 with SIM 44-4, the detected value in this adjustment is displayed. If PTH is set to other than 0, the value set with SIM 44-4 is displayed.

Main code 51

51-2

Purpose	Adjustment
Function (Content)	Used to adjust the contact pressure of paper on the resist roller in each section (machine paper feed, duplex paper feed, SPF paper feed). (This adjustment is required when the print image position varies or when paper jam occurs frequently.)
Section	Paper transport (paper exit, switchback, transport)
Item	Operation
Operation/Procedure	Perform the resist quantity adjustment. 1) The current set value is highlighted on the right of each item. In this screen, be sure to select "1: COPY START." (Set value: 1) 2) Enter the correction value with 10 digit key pad. Press P to store the set value. 3) When the value is increased by 1, the resist quantity is changed by 1ms. 4) Press START to start copying and store the set value. (Display value: 1) 5) Select a paper feed tray. (Set value 2)



<List of set values 1>

			45PPM	28PPM 35PPM
0	TRAY SELECT	Paper feed tray selection (1 - 5)		
1	PRINT START	Copy start (Initial value)		
2	TRAY1	Tray 1 resist adjustment value	60	65
3	TRAY2	Tray 2 resist adjustment value	50	55
4	DESK	Desk resist adjustment value	50	55
5	BPT	Manual tray resist adjustment value	55	60
6	ADU	ADU resist adjustment value	50	55
7	SPF(HIGH)	SPF resist adjustment value (High speed)	60	60
8	SPF(LOW)	SPF resist adjustment value (Low speed)	75	75

<List of display values 1>

Normal display		NOW COPYING
ERROR display	Door open	DOOR OPEN.
	Jam	JAM
	Paper empty	PAPER EMPTY.

<List of set values 2>

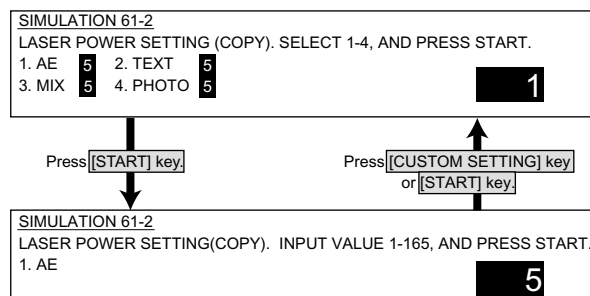
1	TRAY1	11	TRAY1 with Duplex
2	TRAY2	12	TRAY2 with Duplex
3	TRAY3	13	TRAY3 with Duplex
4	TRAY4	14	TRAY4 with Duplex
5	Manual feed	15	Manual feed with Duplex

* The selected tray is registered as an initial set value in the initial screen.

Main code 61

61-2

Purpose	Adjustment
Function (Content)	Used to adjust the laser power (absolute value) in the copy mode.
Section	PCU
Item	Operation
Operation/Procedure	Enter the laser power set value in copying, and press START to store it.

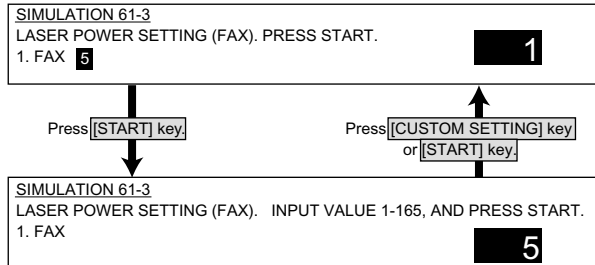


<List of set values>

			Initial value	Set range
1	Auto exposure mode	45PPM	100	100 - 150
		35/28PPM	76	(45PPM)
2	Text mode	45PPM	100	76 - 150
		35/28PPM	76	(28/35PPM)
3	Text/Photo mode	45PPM	100	
		35/28PPM	76	
4	Photo mode	45PPM	100	
		35/28PPM	76	

61-3

Purpose	Adjustment
Function (Content)	Used to adjust the scanner (exposure) laser power (absolute value) in the FAX reception mode. (Only when FAX is installed.)
Section	PCU
Item	Operation
Operation/Procedure	Set the laser power in FAX reception. Enter the set value and press Start to store it.

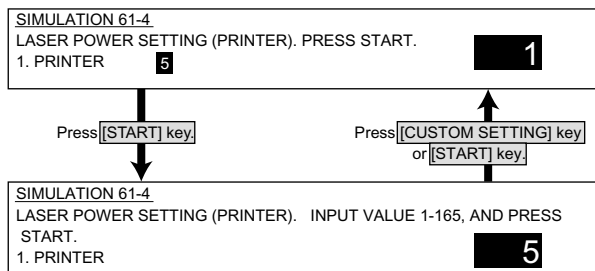


<List of set values>

			Initial value	Set range
1	FAX reception	45PPM	100	100 - 150
		35/28PPM	76	(45PPM) 76 - 150 (28/35PPM)

61-4

Purpose	Adjustment
Function (Content)	Used to adjust the laser power (absolute value) in the printer mode.
Section	PCU
Item	Operation
Operation/Procedure	Set the laser power value in the printer mode. Enter the value and press START to store it.



<List of set values>

			Initial value	Set range
1	PRINTER	45PPM	100	100 - 150
		28/35PPM	76	(45PPM) 76 - 150 (28/35PPM)

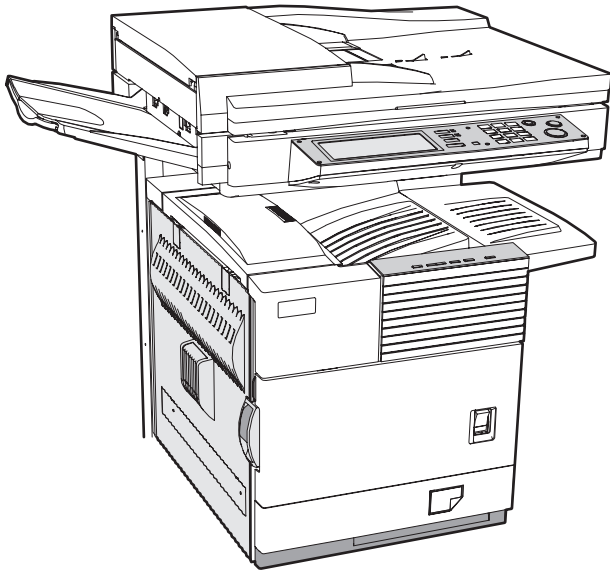
Default setup for supporting 100K drums

- 1) When the value is changed from 127 to 255 by SIM 44-1, the following default values of the laser power setup must be adjusted.

Drum	50K	100K(80K)
Sim44-1	127	255
Model	35PPM	45PPM
Laser power setup SIM 61-2	80	104
Maintenance cycle SIM 21-1	0(50K)	7(100K)
		5(80K)

- * When the EEPROM is replaced (memory is cleared) in a 28-sheet machine, setup of the 100K drum must be performed with SIM 44-1 (setup value: 255).

The above setup values are adjusted according to the setup of SIM 44-1. (Though the destination setup is changed (SIM 26-6), the above setup will not be changed automatically.)



LASER PRINTER (MULTI FUNCTION)

AR-M280N
MODEL AR-M280U

CONTENTS

- 1 Exteriors
- 2 Left door unit
- 3 PS roller unit
- 4 TC unit
- 7 Fusing unit
- 8 Delivery turn over unit
- 9 MC unit
- 10 Process unit
- 11 Developer unit
- 12 Controller BOX unit
- 14 Rear frame section 1
- 15 Rear frame section 2
- 16 Cassetter unit
- 17 Packing material & Accessories
- 18 PCU PWB unit
- 20 Mother board
- 26 MFP Control PWB (ARM280N)
- 27 STD control PWB (ARM280U)
- index

The AR-M280N/M280U Parts Guide describes only the parts change from AR-P350/AR-P450 Parts Guide. for the common parts, please refer to the AR-P350/AR-P450(CODE :00ZAR350LPP1/) Parts Guide.

DEFINITION

The definition of each Rank is as follows and also noted in the list

- A: Parts necessary to be stocked as High usage parts.
 - B: Parts necessary to be stocked as Standard usage parts.
 - C: Low usage parts.
 - D: Parts necessary for refurbish.
 - E: Unit parts recommended to be stocked for efficient after sales service.
- Please note that the lead time for the said parts may be longer than normal parts.
- S: Consumable parts.

Please note that the following parts used in Copier under the same description are classified into A or B Rank depending upon the place used.

Example: Gear made of Metal, Sprocket, Bearing, Belt made of Rubber, Spring clutch mechanism.

ARank : The parts which may be with the revolution or loading.

BRank : Parts similar to A Rank parts, but are not included in Rank A.

Because parts marked with "△" is indispensable for the machine safety maintenance and operation, it must be replaced with the parts specific to the product specification.

- Other than this Parts Guide, please refer to documents Service Manual(including Circuit Diagram)of this model.
- Please use the 13 digit code described in the right hand corner of front cover of the document, when you place an order.
- For U.S. only-Use order codes provided in advertising literature. Do not order from parts department.

1 Exteriors

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
5	GCAB-0940FCZ2	BA		D	Paper exit tray exterior
11	HPNLC0243FCZ1	AP		D	Operation cabinet
26	CPNLH0020QS41	AK	N	D	Model panel [ARM280U]
	CPNLH0020QS42	AK	N	D	Model panel [ARM280N]

2 Left door unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
3	LX-BZ0147FCZ1	AC		C	Screw
9	PTME-0287FCZ1	AD		C	Transfer lock pawl
13	LANGT1407FCZ2	AR		C	ACC fixing angle F
16	PTME-0279FCZ1	AB		C	Left door lock pawl
27	NFANP0069FCZZ	AV		B	Fan

3 PS roller unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
11	PSHEP4925FCZZ	AC		C	Paper powder remove sub sheet
38	LX-BZ0589FCZZ	AA		C	Screw

4 Main drive unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
25	LX-BZ0670FCZ1	AC		C	Screw
67	LX-BZ0788FCZ1	AC		C	Screw
71	NSFTZ2576FCZ1	AL		C	PS roller shaft

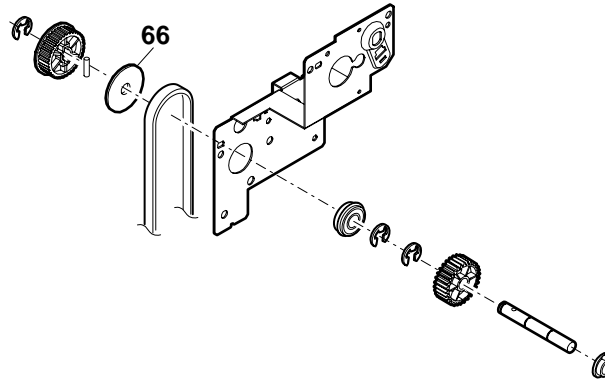
7 Fusing unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
3	PTME-0282FCZ1	AH		C	Upper separator pawl
11	PCOVP1546FCZ1	AY		C	Fusing upper cover

8 Delivery turn over unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
5	NFANP0069FCZZ	AV		B	Fan
10	PGIDM1896FCZ1	AV		C	Paper exit upper PG
14	LDAIU0626FCZ2	AK		C	Paper exit follower roller fixing plate
38	NBLTH0327FCZ1	AL		C	Belt
47	NBLTH0350FCZ1	AH		C	Belt
62	PBRSS0208FCZ1	AH		C	Discharge brush
66	PSHEP4962FCZ1	AC		C	Belt holder sheet

8 Delivery turn over unit



9 MC unit

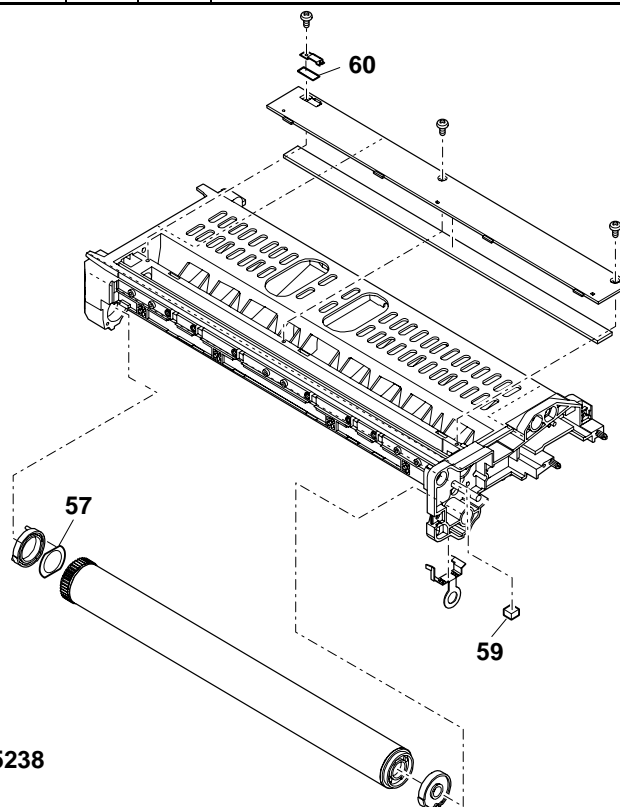
FCP05237

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
3	CPLTM6048DS51	AL		E	Plate

10 Process unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
8	PMLT-1245FCZ2	AE		C	Process U cushion
16	MSPRC3010FCZ1	AB		C	Shutter open close spring
24	XBBSD30P08000	AA		C	Screw(3x8)
26	LX-BZ0656FCZ1	AE		C	Screw
45	PRNGF0106FCZ2	AC		C	Starling N
47	MSPRC2954FCZ2	AB		C	Sparation pawl spring
48	PMLT-1238FCZ1	AC		C	Toner shield cushion
57	LX-WZ0440FCZZ	AC		C	Spacer
59	PSPAZ1431FCZZ	AA		C	Spacer A
60	PSPAZ1432FCZZ	AA		C	Spacer B
501	CHLDZ1473DS51	BH		E	Separation pawl holder unit

10 Process unit

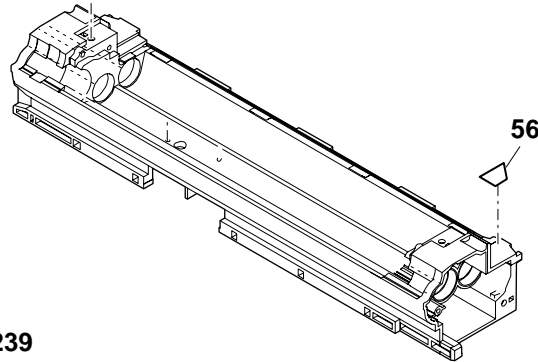


FCP05238

11 Developer unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
29	LPLTM6022FCZZ	AC		C	M4 plate
48	PMLT-1241FCZ1	AA		C	DV-BOX cushion
49	PMLT-1244FCZ1	AC		C	Doctor cushion R
56	PMLT-1296FCZZ	AH		C	Shutter cushion

11 Developer unit

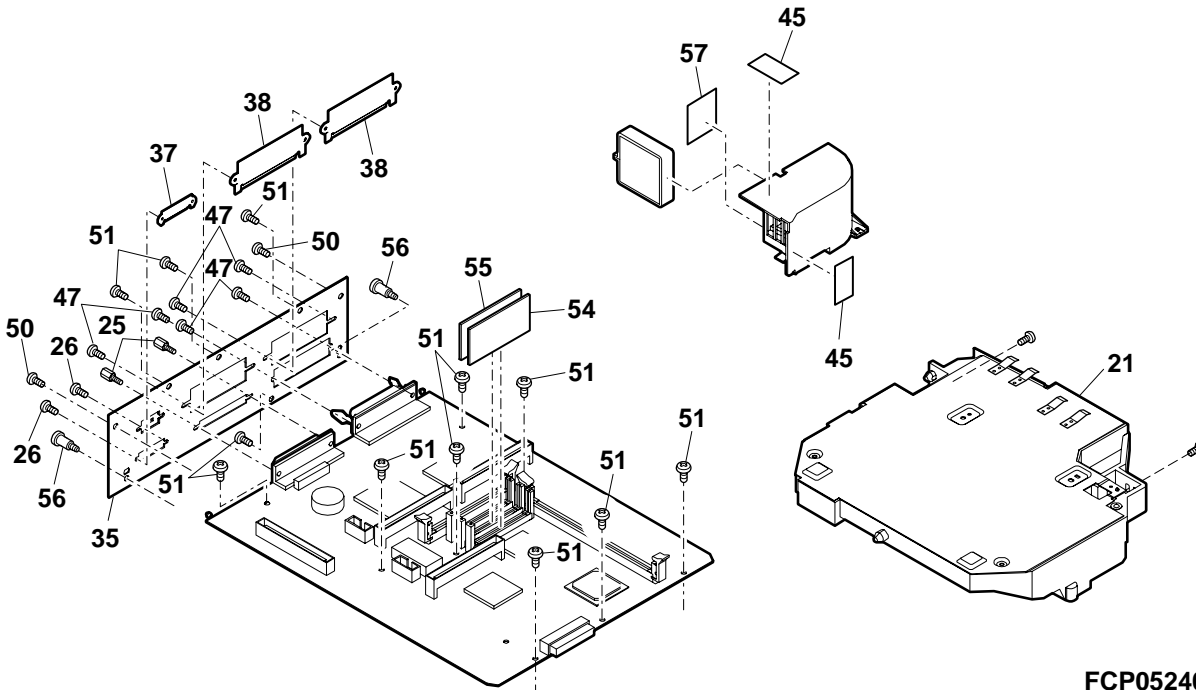


FCP05239

12 Controller BOX unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	PDUC-0165FCZ1	AF		C	Controller duct
5	NFANP0069FCZZ	AV		B	Fan
9	PCOVP1555FCZ1	AE		C	Controller BOX cover
12	NFANP0069FCZZ	AV		B	Fan
14	QCNW-0201FCZZ	AG		C	Printer interface FFC
21	DUNT-7093DS15	CD	N	E	LSU 28 unit
25	LX-BZ0921FCZ1	AE		C	Screw(3×6)
26	XBPSD26P06000	AA		C	Screw(2.6×6)
35	LPLTM5765FCZ1	AH		C	Control joint plate
37	PCOVP1560FCZZ	AC		C	FAX I/F cover
38	PCOVP1557FCZZ	AC		C	LAN/Option cover
45	PSHEP4945FCZZ	AC		C	Controller duct sheet B
47	XBPSD30P06000	AA		C	Screw(3×6)
50	XHBSE30P06000	AA		C	Screw(3×6)
51	XBBSD30P06000	AA		C	Screw(3×6)
54	VHi28F322L03F	BR		B	MFP flash ROM A(28F322L03F)
	VHi28F322L15F	BU		B	STD flash ROM A(28F322L15F)
55	VHi28F322L04F	BR		B	MFP flash ROM B(28F322L04F)
	VHi28F322L16F	BU		B	STD flash ROM B(28F322L16F)
56	LX-BZ0828FCZZ	AD		C	Screw
57	PSHEP5009FCZZ	AC		C	Control duct sheet

12 Controller BOX unit

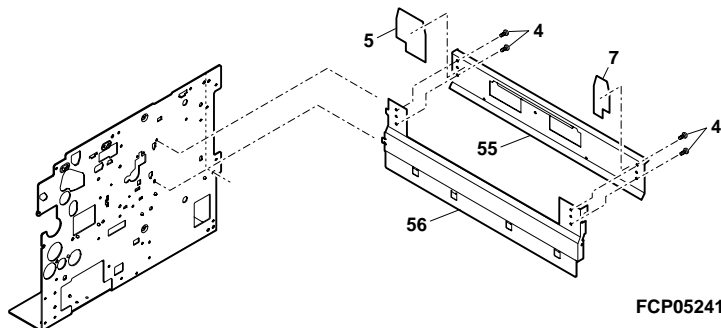


FCP05240

14 Rear frame section 1

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	NFANP0069FCZZ	AV		B	Fan
4	XHBSE40P08000	AA		C	Screw(4x8)
5	PSHEZ4874FCZ1	AC		C	LSU cleaning sheet R
7	PSHEZ4873FCZ1	AC		C	LSU cleaning sheet F
37	PSHEZ4885FCZ1	AB		C	Paper feed base sheet R
55	PCOVP1693FCZZ	AH		C	Duct support cover
56	LSTYM0255FCZ1	AL		C	Duct support plate

14 Rear frame section 1



15 Rear frame section 2

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
6	RPLU-0326FCZ2	AN		B	Separator pawl solenoid
26	CPWBN1515FCE2	BY	N	E	PCU PWB unit
54	QCNW-0205FCZZ	AC		C	HV interface FFC
55	QCNW-0204FCZZ	AC		C	Drum motor interface FFC
56	QCNW-0203FCZZ	AD		C	Main motor interface FFC
58	VH128F081L06F	BE		B	PCU flash ROM(28F081L06F)

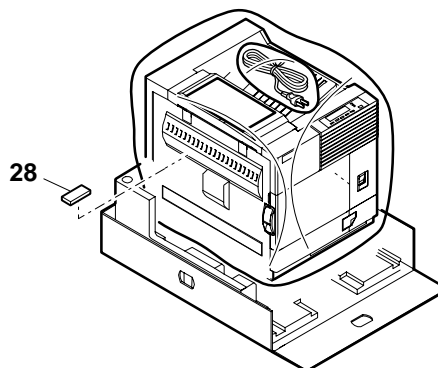
16 Cassette unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
20	PTPE-0243FCZ1	AC		C	Side plate tape
25	PGIDH1833FCZ1	AC	N	C	Side plate guide

17 Packing material & Accessories

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
5	SPAKC6122DS46		N	D	Packing case [ARM280N]
	SPAKC6122DS45		N	D	Packing case [ARM280U]
6	TCADZ1521FCZ1	AE		D	Fusing pressurization manual
12	CDSKA0005FC39	AM		D	Printer CD
13	PSHEP4927FCZZ	AM		D	Key sheet MFP
20	TINSE2288FCZZ	AZ	N	D	Operation manual PRT [USA]
	TINSF2289FCZZ		N	D	Operation manual PRT [French]
	TINSF2291FCZZ		N	D	Operation manual [French]
	TINSF2293FCZZ	AN		D	Operation manual [French]
	TINSF2296FCZZ		N	D	Operation manual [French]
	TINSE2290FCZZ	AU	N	D	Operation manual [USA]
	TINSE2292FCZZ	AN		D	Operation manual SCANNER [USA]
	TINSE2294FCZZ	AK	N	D	Operation manual KEY [USA]
	TINSE2295FCZZ	AK	N	D	Operation manual [USA]
28	TINSE2297FCZZ	AN		D	Operation manual [USA]
	SPAKA6272FCZZ	AG		D	Fusing protect add R

17 Packing material & Accessories



FCP05242

18 PCU PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCM0670FCZZ	AC		C	Connector(5pin) [CN17]
2	QCNCM0878FCZZ	AF		C	Connector(30pin) [CN12]
3	QCNCM0923FC24	AF		C	Connector(24pin) [CN13]
4	QCNCM0923FC32	AG		C	Connector(32Pin) [CN4]
5	QCNCM1069ACZZ	AD		C	Connector(6pin) [CN18]
6	QCNCM1143FCZZ	AG		C	Connector(22pin) [CN11]
7	QCNCM1144FCZZ	AH		C	Connector(24pin) [CN10]
8	QCNCM1175FCZZ	AG		C	Connector(30pin) [CN16]
9	QCNCM5093SC0B	AB		C	Connector(2pin) [CN7,22]
10	QCNCM7014SC0H	AB		C	Connector(8pin) [CN5]
11	QCNCM7014SC1A	AC		C	Connector(11pin) [CN8]
12	QCNCM7014SC1D	AC		C	Connector(14pin) [CN14]
13	QCNCW0002ESZZ	AC		C	Connector(8pin) [CN9]
14	QCNCW1136FCZZ	AC		C	Connector(8pin) [CN6]
15	QCNCW1139FCZZ	AC		C	Connector(14pin) [CN15]
16	QCNCW1140FCZZ	AD		C	Connector(28pin) [CN1,2]
17	QCNCW1150FCZZ	AE		C	Connector(24pin) [CN3]
18	QSOCZ0002QSZZ	AD		C	IC socket(8pin) [IC17]
19	QSOCZ0071FCZZ	AP		C	Socket(MM20-72B1-1) [SOCKET1]
20	QSW-P0005QSZZ	AC		B	Tact switch(B3F-6102) [SW1]
21	RCRSZ0001QSZZ	AG		B	Crystal(19.6608MHz) [X1]
22	RCRUB0002FCZZ	AP		B	Crystal(31.554MHz) [X2]
23	RFiLN0042FCZZ	AC		C	EMI filter(ZJSR5101-101) [NF1~11]
24	RFiLN0047FCZZ	AC		C	EMI filter(MMZ21608S121) [NF12,13]
25	RMPTR4103ACZZ	AB		B	Block resistor(10KΩx4) [BR1-BR24]
26	VCCCCZ1HH100D	AA		C	Capacitor(50WV 10pF) [C86]
27	VCCCCZ1HH101J	AA		C	Capacitor(50WV 100pF) [C12,13,28,43]
28	VCCCCZ1HH220J	AA		C	Capacitor(50WV 22pF) [C39,50]
29	VCEAGA0JW107M	AC		C	Capacitor(6.3WV 100μF) [C146]
30	VCEAGU1AW476M	AA		C	Capacitor(10WV 47μF) [C17]
31	VCEAGA1AW477M	AB		C	Capacitor(10WV 470μF) [C99]
32	VCEAGA1CW477M	AB		C	Capacitor(16WV 470μF) [C108,147]
33	VCEAGU1HW335M	AA		C	Capacitor(50WV 3.3μF) [C63]
34	VCEAGA1VW106M	AA		C	Capacitor(35WV 10μF) [C2,104]
35	VCEAGU1VW107M	AB		C	Capacitor(35WV 100μF) [C117,118]
36	VCEAGA1VW227M	AB		C	Capacitor(35WV 220μF) [C129]
37	VCEAGU1VW476M	AB		C	Capacitor(35WV 47μF) [C9,144]
38	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C6,19,29,30,32,40,42,47]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C51,55,58,59,61,75,80]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C87,88,101,102,106,116]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C120,121,131,132,138]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C140,142,143,151,153]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C189,190,191]
39	VCKYCZ1EF223Z	AA		C	Capacitor(50WV 0.022μF) [C14,62,100,107,123]
	VCKYCZ1EF223Z	AA		C	Capacitor(50WV 0.022μF) [C124,128,130,145]
40	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF) [C1,5,15,16,18,31,33,34]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF) [C36,37,41,44,46,48,49,52]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF) [C53,54,57,60,64~74]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF) [C76,77,78,81,82~85]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF) [C89,90,91,93,94,96,97,98]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF) [C103,105,109~115,119]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF) [C125,126,127,133,136,137]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF) [C139,141,149,155,156,160]
41	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF) [C173~188,148,154]
	VCKYCZ1HB222K	AA		C	Capacitor(50WV 2200pF) [C3,7,8,11]
42	VCQYNU1HM103K	AA		C	Capacitor(50WV 0.010μF) [C150]
43	VHDDAN202K/-1	AB		B	Diode(DAN202K) [D1,8,9,11,13,16]
	VHDDAN202K/-1	AB		B	Diode(DAN202K) [D18,23,29,32]
44	VHDDAP202K/-1	AB		B	Diode(DAP202K) [D10,14,15,17,30]
45	VHDDA204K/-1	AC		B	Diode(DA204K) [D2,3,12,19,20,31]
46	VHDDSS133/-1	AA		B	Diode(1SS133) [D25,26,27]
47	VHDMA704A/-1	AC		B	Diode(MA704A) [D22,28]
48	VHDM1FL20U+-1	AC		B	Diode(M1FL20U) [D4,5,6,7,33]
49	VHEHVS3B3/-1	AB		B	Zener diode(HZS3B3) [ZD1]
50	VHERD22FB/-1	AD		B	Zener diode(RD22FB)(20.8-23.3V) [ZD2,3]
51	VHiD82805GN-1	BA		B	IC(D82805GN) [IC16]
52	VHiEES04L400P	AG		B	IC(EES04L400P) [IC17]
53	VHiFS781BZB-1	AP		B	IC(FS781BZB) [IC13]
54	VHiFS781BZB-1	AP		B	IC(FS781BZB) [IC13]
	VHiH8S2322R-1	AZ		B	IC(H8S2322R) [IC8]
55	VHiLM324D+/-1	AE		B	IC(LM324D) [IC22]
56	VHiLM339D+/-1	AE		B	IC(LM339D) [IC18,21]
57	VHiLVX240SJ-1	AG		B	IC(LVX240SJ) [IC6]
58	VHiMTD13611-1	AR		B	IC(MTD1361-4101) [IC3]
59	VHiNJM7805A-1	AH		B	IC(NJM7805A) [IC25]
60	VHiTA7291S/-1	AF		B	IC(TA7291S) [IC2,15]
61	VHiTD62003AP1	AG		B	IC(TD620003AP1) [IC1,19,20]
62	VHiTD62503F/-	AG		B	IC(TD62503F) [IC7,12,14,23,24,26]
63	VHi74VHCT240X	AF		B	IC(74VHCT240X) [IC9]
64	VHi74VHCT244X	AF		B	IC(74VHCT244X) [IC4,5,10]

18 PCU PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
65	VHP1LHEE-002A	AC		B	LED (Red)(1LHEE-002A) [LED1]
66	VHV1CPS1.2/-1	AF		B	IC protecot(ICPS1.2) [ICP1]
67	VRD-HT2EY911J	AA		C	Resistor(1/4W 910Ω ±5%) [R141]
68	VRD-HT2HY242J	AA		C	Resistor(1/2W 2.4KΩ ±5%) [R5,6]
69	VRD-HT2HY471J	AA		C	Resistor(1/2W 470Ω ±5%) [R172,173]
70	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%) [R1,39,110,170,171,199]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%) [R200,201,203,204,207]
71	VRS-CZ1JD101J	AA		C	Resistor(1/16W 100Ω ±5%) [R59,125,178,197,198]
72	VRS-CZ1JD102J	AA		C	Resistor(1/16W 1.0KΩ ±5%) [R13,15,36,44,51]
	VRS-CZ1JD102J	AA		C	Resistor(1/16W 1.0KΩ ±5%) [R140,205,206]
73	VRS-CZ1JD103F	AA		C	Resistor(1/16W 10KΩ ±1%) [R2,132,154,157,182]
74	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R4,12,22,23,27-33]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R35,38,43,52-55,72]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R73,74,77,80,83,84,92]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R93,94,104,106,108]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R109,111,112,113,115]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R117-120,123,126]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R127,129,133,135,136]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R144,153,161,164,165]
75	VRS-CZ1JD104J	AA		C	Resistor(1/16W 100KΩ ±5%) [R138]
	VRS-CZ1JD104J	AA		C	Resistor(1/16W 1.2KΩ ±5%) [R151]
77	VRS-CZ1JD151J	AA		C	Resistor(1/16W 150Ω ±5%) [R17,24]
78	VRS-CZ1JD152F	AA		C	Resistor(1/16W 1.5KΩ ±1%) [R142,150]
79	VRS-CZ1JD152J	AA		C	Resistor(1/16W 1.5KΩ ±5%) [R16]
80	VRS-CZ1JD153F	AB		C	Resistor(1/16W 15KΩ ±1%) [R152,181]
81	VRS-CZ1JD201J	AA		C	Resistor(1/16W 200Ω ±5%) [R25,26,139]
82	VRS-CZ1JD203J	AA		C	Resistor(1/16W 300KΩ ±5%) [R11,114,145,166,174]
	VRS-CZ1JD203J	AA		C	Resistor(1/16W 300KΩ ±5%) [R175,176,177,191,192]
	VRS-CZ1JD203J	AA		C	Resistor(1/16W 300KΩ ±5%) [R193,194,195,196]
83	VRS-CZ1JD304F	AA		C	Resistor(1/16W 20KΩ ±5%) [R146,159]
84	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%) [R40,41,45-50,56,57]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%) [R58,60-63,65,66,68]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%) [R69,70,71,75,76,78,79]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%) [R85-91,95-103]
85	VRS-CZ1JD332J	AA		C	Resistor(1/16W 3.3KΩ ±5%) [R81]
86	VRS-CZ1JD471J	AA		C	Resistor(1/16W 470Ω ±5%) [R18,19]
87	VRS-CZ1JD472F	AA		C	Resistor(1/16W 4.7kΩ ±1%) [R131,143,149,163]
88	VRS-CZ1JD473F	AA		C	Resistor(1/16W 47kΩ ±1%) [R148,162]
89	VRS-CZ1JD473J	AA		C	Resistor(1/16W 47KΩ ±5%) [R186,187,189,190]
90	VRS-CZ1JD562J	AA		C	Resistor(1/16W 5.6KΩ ±5%) [R137,169]
91	VRS-CZ1JD621F	AA		C	Resistor(1/16W 620Ω ±1%) [R147,158]
92	VRS-CZ1JD680J	AA		C	Resistor(1/16W 68Ω ±5%) [R105]
93	VRS-CZ1JD681F	AA		C	Resistor(1/16W 680Ω ±1%) [R156,185]
94	VRS-CZ1JD681J	AA		C	Resistor(1/16W 680Ω ±5%) [R42]
95	VRS-CZ1JD752J	AA		C	Resistor(1/16W 7.5KΩ ±5%) [R3,21]
96	VRS-CZ1JD822F	AA		C	Resistor(1/16W 8.2KΩ ±1%) [R155,184]
97	VRS-RE3AA241J	AC		C	Resistor(1W 240Ω ±5%) [R160]
98	VRS-RE3DA1R0J	AB		C	Resistor(2W 1.0Ω ±5%) [R14,20]
99	VRS-RE3DA8R2J	AC		C	Resistor(1W 8.2Ω ±5%) [R167]
100	VSDTA123YK/-1	AB		B	Transistor(DTA123YK) [Q8,9]
101	VSDTC114YK/-1	AC		B	Transistor(DTC114YK) [Q2,4,5,6,7]
102	VSDTD114EK/-1	AC		B	Transistor(DTD114EK) [Q1]
103	VS2SK3018+-1	AC		B	Transistor(2SK3018) [Q10,11]
	(Unit)				
901	CPWBN1515FCE2	BY	N	E	PCU PWB unit

20 Mother board

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
9	VRS-RE3LA6R2J	AC		C	Resistor(3W 6.2Ω ±5%)

26 MFP Control PWB (ARM280N)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	PCAPH0010GCZZ	AD		C	Jumper cap(JM-2W-96) [JP2,3,4,5,6,7]
2	PCOV1468FCZZ	AD		C	Battery cover
3	QCNCM1183FCZZ	AM		C	Connector(100P15.2JXK) [CN2,12]
4	QCNCM1146FCZZ	AE		C	Connector(9A12-1034) [CN14]
5	QCNCM1182FCZZ	AM		C	Connector(100P9.2JXKS) [CN16]
6	QCNCW0946FCZZ	AH		C	Connector(36pin) [CN1]
7	QCNCW1147FCZZ	AL		C	Connector(TX2450RLTH1) [CN13]

26 MFP Control PWB (ARM280N)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
8	QCNCW1149FCZZ	AN		C	Connector(8AL068S305C) [CN8]
9	QFS-D132CQCZZ	AG		A	Fuse(1.25/250T) [F1]
10	QFSHB0028FCZZ	AC		C	Fuse holder(TP00351-31) [F1]
11	QPIN-0003GCZZ	AC		C	Pin(T3B-SQ) [JP2,3,4,5,6,7]
12	QSOCZ0001QSZZ	AL		C	Socket(DMM168-FLAA2-3A133) [CN3]
13	QSOCZ0073FCNA	AL		C	Connector(DMM2SD72A11) [CN4,5,6]
14	QSOCZ6428ACZZ	AE		C	IC socket(28pin) [IC36]
15	RCRSP6676RCZZ	AG		B	Crystal(32.768KHz) [X6]
16	RCRUA0005FCZZ	AP		B	Crystal(14.745KHz) [X7]
17	RCRUA0007FCZZ	AP		B	Crystal(31.554MHz) [X4]
18	RCRUA0008FCZZ	AP		B	Crystal(40.57MHz) [X2]
19	RCRUA0009FCZZ	AP		B	Crystal(66.666MHz) [X3]
20	RCRUA0012FCZZ	AP		B	Crystal(66.666MHz)Ai5VLLLAj [X1]
21	RCRUA0014FCZZ	AP		B	Crystal(68.5MHz) [X5]
22	RFILN0048FCZZ	AC		C	Ferrite bead(BLM10B121SB) [L2,3]
23	RFILN0051FCZZ	AC		C	Ferrite bead(MMZ1608D121B) [L25-30,33,34]
24	RMPTR4100ACZZ	AB		B	Block resistor(10Ω×4) [BR6-13,15-25,28,29]
	RMPTR4100ACZZ	AB		B	Block resistor(10Ω×4) [BR33-44,46,48,53-72]
25	RMPTR4103ACZZ	AB		B	Block resistor(10KΩ×4) [BR1-5,14,26,27,30,31,32]
	RMPTR4103ACZZ	AB		B	Block resistor(10KΩ×4) [BR74,76,78,80-102]
26	RMPTR4330ACZZ	AB		B	Block resistor(33Ω×4) [BR47,49,50,51,73,75,77,79]
27	RMPTR4472ACZZ	AB		B	Block resistor(4.7KΩ×4) [BR45,52]
28	UBATI0014FCZZ	AN		B	Battery(CR2477-H01) [BT1]
29	VCCCCZ1HH101J	AA		C	Capacitor(50WV 100pF) [C7,8,10,17,18,20,22,30,33]
	VCCCCZ1HH101J	AA		C	Capacitor(50WV 100pF) [C35,38,39,40,43,47,48,51]
30	VCCCCZ1HH220J	AA		C	Capacitor(50WV 22pF) [C61]
31	VCEAPH1HC105M	AC		C	Capacitor(50WV 1μF) [C181,188,205,206]
32	VCEAPS1AC227M	AD		C	Capacitor(10WV 220μF) [C309,310]
33	VCEAPS1CC106M	AC		C	Capacitor(16WV 10μF) [C1,6,21,75,94,111,125,165]
	VCEAPS1CC106M	AC		C	Capacitor(16WV 10μF) [C166,169,178,179,223,224]
34	VCEAPS1CC226M	AC		C	Capacitor(16WV 22μF) [C57,64,90,114,115,136,170,176]
35	VCEAPS1CC476M	AC		C	Capacitor(16WV 47μF) [C95,167,168,180]
36	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C3,9,11,12,13,14,23-29]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C31,32,34,36,37,41,42,44,45]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C46,49,50,52,53,54,55,56]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C58,59,60,62,63,65,66,67]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C68,70,71,72,73,74,76-82]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C85,86,87,88,89,91,92,93]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C96,97,98,99,100,102-108]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C110,112,113,116-124,126]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C127,128,130,131,132,133]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C134,135,137,139,140-145]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C149,151,153-164,172,173]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C177,182,183,185,186,187]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C189-199,201,202,204]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF) [C208-222,235-262]
37	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF) [C264-279,292-303]
38	VCKYCZ1HF103Z	AA		C	Capacitor(50WV 0.01μF) [C129]
39	VHDDAP202U/-1	AB		B	Diode(DAP202U) [C69,109]
40	VHDBR451F/-1	AD		B	Diode(RB451F) [D7,10]
41	VHDLRS73///-1	AA		B	Diode(RLS73) [D12,14,20,21,22]
42	VHi65946P07-1	BA		B	IC(65946P07) [D8,9]
43	VHi74LCX08MTC	AE		B	IC(74LCX08MTC) [IC32]
44	VHi74LCX14MTC	AE		B	IC(74LCX14MTC) [IC26,46]
45	VHi74LCX244MT	AG		B	IC(74LCX244MT) [IC43]
46	VHi74LCX32MTC	AE		B	IC(74LCX32MTC) [IC12]
47	VHi74LVX16128	AP		B	IC(74LVX16128) [IC11]
48	VHi90LV17AW-1	AP		B	IC(90LV17AW) [IC15]
49	VHiDS14C238//	AT		B	IC(DS14C238) [IC18]
50	VHiEEP64-120P	AW		B	IC(EEP64-120P) [IC42]
51	VHiHG73C095-1	AY		B	IC(HG73C095) [IC36]
52	VHiKS0U1347-1	BN		B	IC(KS0U1347) [IC53]
53	VHiLCX157MT-1	AG		B	IC(LCX157MT) [IC19]
54	VHiLCX16244-1	AM		B	IC(LCX16244) [IC14]
55	VHiLCX16245-1	AM		B	IC(LCX16245) [IC21,49,50]
56	VHiLCX16373-1	AM		B	IC(LCX16373) [IC16,24,31,51,52]
57	VHiLCX74MTC-1	AE		B	IC(LCX74MTC) [IC34]
58	VHiLM393D+-1	AE		B	IC(LM393D) [IC10]
59	VHiLVT240MT-1	AL		B	IC(LVT240MT) [IC39]
60	VHiM87J4810-1	BK		B	IC(M87J4810) [IC8]
61	VHiN2370R04-1	AF		B	IC(N2370R04) [IC25]
62	VHiN2370R33-1	AF		B	IC(N2370R33) [IC23]
63	VHiN2391D25-1	AG		B	IC(N2391D25) [IC54]
64	VHiNJM317DL-1	AK		B	IC(NJM317DL) [IC35,33]
65	VHiNJU6356E-1	AK		B	IC(NJU6356E) [IC2]
66	VHiPi6C2309-1	AR		B	IC(Pi6C2309) [IC40]
67	VHiPM2500+-1	BP		B	IC(PM2500) [IC9,29]
68	VHiPST598DN-1	AF		B	IC(PST598DN) [IC13]
69	VHiPST598iN-1	AF		B	IC(PST598I) [IC47]

26 MFP Control PWB (ARM280N)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
70	VHISD4M16L1-1	AZ		B	IC(SD4M16L1) [IC22]
71	VHISD8M16L1-1	BB		B	IC(SD8M16L1) [IC4,5,6,7,27]
72	VHISR1024-7LL	AU		B	IC(SR1024-7LL) [IC55,56]
73	VHIT4955A20-1	BF		B	IC(T4955A20) [IC20]
74	VHITD62503F-1	AF		B	IC(TD62503F) [IC38,41,44,45]
75	VHP1LHEE-002A	AC		B	LED (Red)(1LHEE-002A) [D13]
76	VHV1608C2701C	AC		B	Varistor(1608C2701C) [RV1-6]
77	VHVICPS1.2/-1	AF		B	IC protecrot(ICPS1.2) [Q1]
78	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%) [R1,3,32,33,49,77,94,97,106]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%) [R108,120,141,166,198,220,222]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%) [R225,229,232,233,290-307]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%) [R310-348,399,400,406]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%) [R407,409,410,413,414]
79	VRS-CZ1JD100J	AA		C	Resistor(1/16W 10Ω ±5%) [R36,59,64,65,96,116,118,126]
	VRS-CZ1JD100J	AA		C	Resistor(1/16W 10Ω ±5%) [R127,136,137,149,161,170,177,185]
80	VRS-CZ1JD101J	AA		C	Resistor(1/16W 100Ω ±5%) [R9,10,101,102,109]
	VRS-CZ1JD101J	AA		C	Resistor(1/16W 100Ω ±5%) [R183,235,236,403]
81	VRS-CZ1JD102J	AA		C	Resistor(1/16W 1.0KΩ ±5%) [R11,129,130,134,151,204]
	VRS-CZ1JD102J	AA		C	Resistor(1/16W 1.0KΩ ±5%) [R205,243,244,253,268,279]
82	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R12,13,15,16,18,20,44,45]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R60,61,62,70,72,73,86,91]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R93,112,115,123,131,139]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R144,154,158,159,160,163]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R165,167,168,203,207,208]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R213,216,217,230,237,238]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R239,240,241,242,245,246]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R249,254,259,260,261,263]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R264,267,269,271,272,273]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R274,282,283,284,285]
83	VRS-CZ1JD183J	AA		C	Resistor(1/16W 18KΩ ±5%) [R275,280]
	VRS-CZ1JD220J	AA		C	Resistor(1/16W 22Ω ±5%) [R14,17,19,24,27,30,31,34]
84	VRS-CZ1JD220J	AA		C	Resistor(1/16W 22Ω ±5%) [R35,37,39,40,43,46,51,54]
	VRS-CZ1JD220J	AA		C	Resistor(1/16W 22Ω ±5%) [R57,247,252]
85	VRS-CZ1JD221J	AA		C	Resistor(1/16W 220Ω ±5%) [R180,181,404]
86	VRS-CZ1JD222J	AA		C	Resistor(1/16W 2.2KΩ ±5%) [R199,200,209,210,211,212]
	VRS-CZ1JD222J	AA		C	Resistor(1/16W 2.2KΩ ±5%) [R218,223,248,265,266,276]
87	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%) [R25,38,41,47,48,52,56,58,66]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%) [R67,68,69,92,117,138,142]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%) [R143,147,148,152,153,173]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%) [R174,175,176,187,188,]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%) [R214,288,289]
88	VRS-CZ1JD332J	AA		C	Resistor(1/16W 3.3KΩ ±5%) [R215,119]
89	VRS-CZ1JD333J	AA		C	Resistor(1/16W 33KΩ ±5%) [R107,179]
90	VRS-CZ1JD470J	AA		C	Resistor(1/16W 47Ω ±5%) [R53,55,308,309]
91	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%) [R63,71,74,76,87,100,111,121]
	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%) [R122,124,128,133,146,162,164]
	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%) [R184,206,221,224,226,227,228]
	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%) [R231,250,251,262,270,277]
92	VRS-CZ1JD511J	AA		C	Resistor(1/16W 510Ω ±5%) [R278]
93	VRS-CZ1JD750J	AA		C	Resistor(1/16W 75Ω ±5%) [R114,145]
94	VRS-CZ1JD823J	AA		C	Resistor(1/16W 82KΩ ±5%) [R202]
95	VSDTC114EK/-1	AB		B	Transistor(DTC114EK) [Q3]
96	VSDTC114YK/-1	AC		B	Transistor(DTC114YK) [Q4]
97	VSUPA502T/-1	AD		B	Transistor(UPA502T) [Q5,6,7]

27 STD control PWB (ARM280U)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	PCAPH0010GCZZ	AD		C	Jumper cap(JM-2W-96) [JP2-7]
2	PCOVP1468FCZZ	AD		C	Battery cover
3	QCNCM1146FCZZ	AE		C	Connector(9A12-1034) [CN14]
4	QCNCM1182FCZZ	AM		C	Connector(100P9.2JXKS) [CN16]
5	QCNCM1183FCZZ	AM		C	Connector(100P15.2JXK) [CN2,12]
6	QCNCW0946FCZZ	AH		C	Connector(36pin) [CN1]
7	QCNCW1147FCZZ	AL		C	Connector(TX2450RLTH1) [CN13]
8	QCNCW1149FCZZ	AN		C	Connector(8AL068S305C) [CN8]
9	QFS-D132CQCZZ	AG		A	Fuse(1.25/250T) [F1]
10	QFSHB0028FCZZ	AC		C	Fuse holder(TP00351-31) [F1]
11	QPIN-0003GCZZ	AC		C	Pin(T3B-SQ) [JP2-7]
12	QSOCZ0001QSZZ	AL		C	Socket(DMM168-FLAA2-3A133) [CN3]
13	QSOCZ0073FCNA	AL		C	Connector(DMM2SD72A11) [CN4,5,6]
14	QSOCZ6428ACZZ	AE		C	IC socket(28pin) [IC36]
15	RCRSP6676RCZZ	AG		B	Crystal(32.768KHz) [X6]
16	RCRUA0005FCZZ	AP		B	Crystal(14.745KHz) [X7]
17	RCRUA0007FCZZ	AP		B	Crystal(31.554MHz) [X4]
18	RCRUA0008FCZZ	AP		B	Crystal(40.57MHz) [X2]

27 STD control PWB (ARM280U)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
19	R C R U A 0 0 0 9 F C Z Z	AP		B	Crystal(66.666MHZ) [X3]
20	R C R U A 0 0 1 2 F C Z Z	AP		B	Crystal(66.666MHZ)Ai5VLLLAj [X1]
21	R C R U A 0 0 1 4 F C Z Z	AP		B	Crystal(68.5MHz) [X5]
22	R F i L N 0 0 4 8 F C Z Z	AC		C	Ferrite bead(BLM10B121SB) [L2,3]
23	R F i L N 0 0 5 1 F C Z Z	AC		C	Ferrite bead(MMZ1608D121B) [L25-30,33,34]
24	R M P T R 4 1 0 0 A C Z Z	AB		B	Block resistor(10Ωx4) [BR6-13,15-25,28,29]
	R M P T R 4 1 0 0 A C Z Z	AB		B	Block resistor(10Ωx4) [BR33-44,46,48,53-72]
25	R M P T R 4 1 0 3 A C Z Z	AB		B	Block resistor(10KΩx4) [BR1-5,14,26,27,30,31,32]
	R M P T R 4 1 0 3 A C Z Z	AB		B	Block resistor(10KΩx4) [BR74,76,78,80-102]
26	R M P T R 4 3 3 0 A C Z Z	AB		B	Block resistor(33Ωx4) [BR47,49,50,51,73,75,77,79]
27	R M P T R 4 4 7 2 A C Z Z	AB		B	Block resistor(4.7KΩx4) [BR45,52]
28	U B A T i 0 0 1 4 F C Z Z	AN		B	Battery(CR2477-H01) [BT1]
29	V C C C C Z 1 H H 1 0 1 J	AA		C	Capacitor(50WV 100pF) [C7,8,10,17,18,20,22,30,33]
	V C C C C Z 1 H H 1 0 1 J	AA		C	Capacitor(50WV 100pF) [C35,38,39,40,43,47,48,51]
30	V C C C C Z 1 H H 2 2 0 J	AA		C	Capacitor(50WV 22pF) [C61]
31	V C E A P H 1 H C 1 0 5 M	AC		C	Capacitor(50WV 1μF) [C181,188,205,206]
32	V C E A P S 1 A C 2 2 7 M	AD		C	Capacitor(10WV 220μF) [C309,310]
33	V C E A P S 1 C C 1 0 6 M	AC		C	Capacitor(16WV 10μF) [C1,6,21,75,94,111,125,165]
	V C E A P S 1 C C 1 0 6 M	AC		C	Capacitor(16WV 10μF) [C166,169,178,179,223,224]
34	V C E A P S 1 C C 2 2 6 M	AC		C	Capacitor(16WV 22μF) [C57,64,90,114,115]
	V C E A P S 1 C C 2 2 6 M	AC		C	Capacitor(16WV 22μF) [C136,170,176]
35	V C E A P S 1 C C 4 7 6 M	AC		C	Capacitor(16WV 47μF) [C95,167,168,180]
36	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C3,9,11,12,13,14]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C23-29,31,32,34]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C36,37,41,42,44,45,46,49]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C50,52-56,58,59,60]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C62,63,65,66,67,68,70,71]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C72,73,74,76-82]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C85-89,91,92,93]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C96-100,102-108]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C110,112,113,116-124]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C126,127,128,130-135]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C137,139-145,149,151]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C153-164,172,173,177]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C182,183,185,186,187]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C189-199,201,202,204]
37	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C208-222,235-262]
	V C K Y C Z 1 C F 1 0 4 Z	AB		C	Capacitor(16WV 0.10μF) [C264-279,292-303]
38	V C K Y C Z 1 H B 1 0 2 K	AA		C	Capacitor(50WV 1000pF) [C129]
39	V C K Y C Z 1 H F 1 0 3 Z	AA		C	Capacitor(50WV 0.01μF) [C69,109]
40	V H D D A P 2 0 2 U / - 1	AB		B	Diode(DAP202U) [D7,10]
41	V H D R B 4 5 1 F / - 1	AD		B	Diode(RB451F) [D12,14,20,21,22]
42	V H D R L S 7 3 / - 1	AA		B	Diode(RLS73) [D8,9]
43	V H i 6 5 9 4 6 P 0 7 - 1	BA		B	IC(65946P07) [IC32]
44	V H i 7 4 L C X 0 8 M T C	AE		B	IC(74LCX08MTC) [IC26,46]
45	V H i 7 4 L C X 1 4 M T C	AE		B	IC(74LCX14MTC) [IC43]
46	V H i 7 4 L C X 2 4 4 M T	AG		B	IC(74LCX244MT) [IC12]
47	V H i 7 4 L C X 3 2 M T C	AE		B	IC(74LCX32MTC) [IC11]
48	V H i 7 4 L V X 1 6 1 2 8	AP		B	IC(74LVX16128) [IC15]
49	V H i 9 0 L V 1 7 A W - 1	AP		B	IC(90LV17AW) [IC18]
50	V H i D S 1 4 C 2 3 8 / -	AT		B	IC(DS14C238) [IC42]
51	V H i E E P 6 4 - 1 2 0 P	AW		B	IC(EEP64-120P) [IC36]
52	V H i H G 7 3 C 0 9 5 - 1	AY		B	IC(HG73C095) [IC53]
53	V H i K S 0 U 1 3 4 7 - 1	BN		B	IC(KS0U1347) [IC19]
54	V H i L C X 1 5 7 M T - 1	AG		B	IC(LCX157MT) [IC14]
55	V H i L C X 1 6 2 4 4 - 1	AM		B	IC(LCX16244) [IC21,49,50]
56	V H i L C X 1 6 2 4 5 - 1	AM		B	IC(LCX16245) [IC16,24,31,51,52]
57	V H i L C X 1 6 3 7 3 - 1	AM		B	IC(LCX16373) [IC34]
58	V H i L C X 7 4 M T C - 1	AE		B	IC(LCX74MTC) [IC10]
59	V H i L M 3 9 3 D + - - 1	AE		B	IC(LM393D) [IC39]
60	V H i L V T 2 4 0 M T - 1	AL		B	IC(LVT240MT) [IC8]
61	V H i M 8 7 J 4 8 1 0 - 1	BK		B	IC(M87J4810) [IC25]
62	V H i N 2 3 7 0 R 0 4 - 1	AF		B	IC(N2370R04) [IC23]
63	V H i N 2 3 7 0 R 3 3 - 1	AF		B	IC(N2370R33) [IC54]
64	V H i N 2 3 9 1 D 2 5 - 1	AG		B	IC(N2391D25) [IC33,35]
65	V H i N J M 3 1 7 D L - 1	AK		B	IC(NJM317DL) [IC2]
66	V H i N J U 6 3 5 6 E - 1	AK		B	IC(NJU6356E) [IC40]
67	V H i P i 6 C 2 3 0 9 - 1	AR		B	IC(Pi6C2309) [IC9,29]
68	V H i P M 2 5 0 0 + - - 1	BP		B	IC(PM2500) [IC13]
69	V H i P S T 5 9 8 D N - 1	AF		B	IC(PST598DN) [IC47]
70	V H i P S T 5 9 8 I N - 1	AF		B	IC(PST598I) [IC48]
71	V H i S D 4 M 1 6 L 1 - 1	AZ		B	IC(SD4M16L1) [IC22]
72	V H i S D 8 M 1 6 L 1 - 1	BB		B	IC(SD8M16L1) [IC4,5,6,7,27]
73	V H i S R 1 0 2 4 - 7 L L	AU		B	IC(SR1024-7LL) [IC55,56]
74	V H i T 4 9 5 5 A 2 0 - 1	BF		B	IC(T4955A20) [IC20]
75	V H i T D 6 2 5 0 3 F - 1	AF		B	IC(TD62503F) [IC38,41,44,45]
76	V H P 1 L H E E - 0 0 2 A	AC		B	LED (Red)(1LHEE-002A) [D13]
77	V H V 1 6 0 8 C 2 7 0 1 C	AC		B	Varistor(M1608C270KT) [RV1-6]
78	V H V i C P S 1 . 2 / - 1	AF		B	IC protecot(ICPS1.2) [Q1]
	V R S - C Z 1 J D 0 0 0 J	AA		C	Resistor(1/16W 0Ω ±5%) [R1,3,32,33,49,94,97]

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[illegible]

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PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
【C】					
CDSKA0005FC39	17- 12	AM		D	
CHLDZ1473DS51	10- 501	BH		E	
CPLTM6048DS51	9- 3	AL		E	
CPNLH0020QS41	1- 26	AK	N	D	
CPNLH0020QS42	1- 26	AK	N	D	
CPWBN1515FCE2	15- 26	BY	N	E	
“	18- 901	BY	N	E	
【D】					
DUNT-7093DS15	12- 21	CD	N	E	
【G】					
GCAB-0940FCZ2	1- 5	BA		D	
【H】					
HPNLC0243FCZ1	1- 11	AP		D	
【L】					
LANGT1407FCZ2	2- 13	AR		C	
LDAIU0626FCZ2	8- 14	AK		C	
LPLTM5765FCZ1	12- 35	AH		C	
LPLTM6022FCZ2	11- 29	AC		C	
LSTYM0255FCZ1	14- 56	AL		C	
LX-BZ0147FCZ1	2- 3	AC		C	
LX-BZ0589FCZ2	3- 38	AA		C	
LX-BZ0656FCZ1	10- 26	AE		C	
LX-BZ0670FCZ1	4- 25	AC		C	
LX-BZ0788FCZ1	4- 67	AC		C	
LX-BZ0828FCZ2	12- 56	AD		C	
LX-BZ0921FCZ1	12- 25	AE		C	
LX-WZ0440FCZ2	10- 57	AC		C	
【M】					
MSPRC2954FCZ2	10- 47	AB		C	
MSPRC3010FCZ1	10- 16	AB		C	
【N】					
NBLTH0327FCZ1	8- 38	AL		C	
NBLTH0350FCZ1	8- 47	AH		C	
NFANP0069FCZ2	12- 12	AV		B	
“	12- 5	AV		B	
“	14- 1	AV		B	
“	2- 27	AV		B	
“	8- 5	AV		B	
NSFTZ2576FCZ1	4- 71	AL		C	
【P】					
PBRSS0208FCZ1	8- 62	AH		C	
PCAPH0010GCZ2	26- 1	AD		C	
“	27- 1	AD		C	
PCOVP1468FCZ2	26- 2	AD		C	
“	27- 2	AD		C	
PCOVP1546FCZ1	7- 11	AY		C	
PCOVP1555FCZ1	12- 9	AE		C	
PCOVP1557FCZ2	12- 38	AC		C	
PCOVP1560FCZ2	12- 37	AC		C	
PCOVP1693FCZ2	14- 55	AH		C	
PDUC-0165FCZ1	12- 1	AF		C	
PGIDH1833FCZ1	16- 25	AC	N	C	
PGIDM1896FCZ1	8- 10	AV		C	
PMLT-1238FCZ1	10- 48	AC		C	
PMLT-1241FCZ1	11- 48	AA		C	
PMLT-1244FCZ1	11- 49	AC		C	
PMLT-1245FCZ2	10- 8	AE		C	
PMLT-1296FCZ2	11- 56	AH		C	
PRNGF0106FCZ2	10- 45	AC		C	
PSHEP4925FCZ2	3- 11	AC		C	
PSHEP4927FCZ2	17- 13	AM		D	
PSHEP4945FCZ2	12- 45	AC		C	
PSHEP4962FCZ1	8- 66	AC		C	
PSHEP5009FCZ2	12- 57	AC		C	
PSHEZ4873FCZ1	14- 7	AC		C	
PSHEZ4874FCZ1	14- 5	AC		C	
PSHEZ4885FCZ1	14- 37	AB		C	
PSPAZ1431FCZ2	10- 59	AA		C	
PSPAZ1432FCZ2	10- 60	AA		C	
PTME-0279FCZ1	2- 16	AB		C	
PTME-0282FCZ1	7- 3	AH		C	
PTME-0287FCZ1	2- 9	AD		C	
PTPE-0243FCZ1	16- 20	AC		C	
【Q】					
QCNCM0670FCZ2	18- 1	AC		C	
QCNCM0878FCZ2	18- 2	AF		C	
QCNCM0923FC24	18- 3	AF		C	
QCNCM0923FC32	18- 4	AG		C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
QCNCM1069ACZZ	18- 5	AD		C	
QCNCM1143FCZZ	18- 6	AG		C	
QCNCM1144FCZZ	18- 7	AH		C	
QCNCM1146FCZZ	26- 4	AE		C	
“	27- 3	AE		C	
QCNCM1175FCZZ	18- 8	AG		C	
QCNCM1182FCZZ	26- 5	AM		C	
“	27- 4	AM		C	
QCNCM1183FCZZ	26- 3	AM		C	
“	27- 5	AM		C	
QCNCM5093SC0B	18- 9	AB		C	
QCNCM7014SC0H	18- 10	AB		C	
QCNCM7014SC1A	18- 11	AC		C	
QCNCM7014SC1D	18- 12	AC		C	
QCNCW0002ESZZ	18- 13	AC		C	
QCNCW0946FCZZ	26- 6	AH		C	
“	27- 6	AH		C	
QCNCW1136FCZZ	18- 14	AC		C	
QCNCW1139FCZZ	18- 15	AC		C	
QCNCW1140FCZZ	18- 16	AD		C	
QCNCW1147FCZZ	26- 7	AL		C	
“	27- 7	AL		C	
QCNCW1149FCZZ	26- 8	AN		C	
“	27- 8	AN		C	
QCNCW1150FCZZ	18- 17	AE		C	
QCNCW-0201FCZZ	12- 14	AG		C	
QCNCW-0203FCZZ	15- 56	AD		C	
QCNCW-0204FCZZ	15- 55	AC		C	
QCNCW-0205FCZZ	15- 54	AC		C	
QFS-D132CQCZZ	26- 9	AG		A	
“	27- 9	AG		A	
QFSHB0028FCZZ	26- 10	AC		C	
“	27- 10	AC		C	
QP i N-0003GCZZ	26- 11	AC		C	
“	27- 11	AC		C	
QSOCZ0001QSZZ	26- 12	AL		C	
“	27- 12	AL		C	
QSOCZ0002QSZZ	18- 18	AD		C	
QSOCZ0071FCZZ	18- 19	AP		C	
QSOCZ0073FCNA	26- 13	AL		C	
“	27- 13	AL		C	
QSOCZ6428ACZZ	26- 14	AE		C	
“	27- 14	AE		C	
QSW-P0005QSZZ	18- 20	AC		B	
【R】					
RCRSP6676RCZZ	26- 15	AG		B	
“	27- 15	AG		B	
RCRSZ0001QSZZ	18- 21	AG		B	
RCRUA0005FCZZ	26- 16	AP		B	
“	27- 16	AP		B	
RCRUA0007FCZZ	26- 17	AP		B	
“	27- 17	AP		B	
RCRUA0008FCZZ	26- 18	AP		B	
“	27- 18	AP		B	
RCRUA0009FCZZ	26- 19	AP		B	
“	27- 19	AP		B	
RCRUA0012FCZZ	26- 20	AP		B	
“	27- 20	AP		B	
RCRUA0014FCZZ	26- 21	AP		B	
“	27- 21	AP		B	
RCRUB0002FCZZ	18- 22	AP		B	
RF i LN0042FCZZ	18- 23	AC		C	
RF i LN0047FCZZ	18- 24	AC		C	
RF i LN0048FCZZ	26- 22	AC		C	
“	27- 22	AC		C	
RF i LN0051FCZZ	26- 23	AC		C	
“	27- 23	AC		C	
RMPTR4100ACZZ	26- 24	AB		B	
“	27- 24	AB		B	
RMPTR4103ACZZ	18- 25	AB		B	
“	26- 25	AB		B	
“	27- 25	AB		B	
RMPTR4330ACZZ	26- 26	AB		B	
“	27- 26	AB		B	
RMPTR4472ACZZ	26- 27	AB		B	
“	27- 27	AB		B	
RPLU-0326FCZ2	15- 6	AN		B	
【S】					
SPAKA6272FCZZ	17- 28	AG		D	
SPAKC6122DS45	17- 5		N	D	
SPAKC6122DS46	17- 5		N	D	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
【T】					
TCADZ1521FCZ1	17- 6	AE		D	
TiNSE2288FCZZ	17- 20	AZ	N	D	
TiNSE2290FCZZ	17- 20	AU	N	D	
TiNSE2292FCZZ	17- 20	AN		D	
TiNSE2294FCZZ	17- 20	AK	N	D	
TiNSE2295FCZZ	17- 20	AK	N	D	
TiNSE2297FCZZ	17- 20	AN		D	
TiNSF2289FCZZ	17- 20		N	D	
TiNSF2291FCZZ	17- 20		N	D	
TiNSF2293FCZZ	17- 20	AN		D	
TiNSF2296FCZZ	17- 20		N	D	
【U】					
UBATi0014FCZZ	26- 28	AN		B	
"	27- 28	AN		B	
【V】					
VCCCCZ1HH100D	18- 26	AA		C	
VCCCCZ1HH101J	18- 27	AA		C	
"	26- 29	AA		C	
"	27- 29	AA		C	
VCCCCZ1HH220J	18- 28	AA		C	
"	26- 30	AA		C	
"	27- 30	AA		C	
VCEAGA0JW107M	18- 29	AC		C	
VCEAGA1AW477M	18- 31	AB		C	
VCEAGA1CW477M	18- 32	AB		C	
VCEAGA1VW106M	18- 34	AA		C	
VCEAGA1VW227M	18- 36	AB		C	
VCEAGU1AW476M	18- 30	AA		C	
VCEAGU1HW335M	18- 33	AA		C	
VCEAGU1VW107M	18- 35	AB		C	
VCEAGU1VW476M	18- 37	AB		C	
VCEAPH1HC105M	26- 31	AC		C	
"	27- 31	AC		C	
VCEAPS1AC227M	26- 32	AD		C	
"	27- 32	AD		C	
VCEAPS1CC106M	26- 33	AC		C	
"	27- 33	AC		C	
VCEAPS1CC226M	26- 34	AC		C	
"	27- 34	AC		C	
VCEAPS1CC476M	26- 35	AC		C	
"	27- 35	AC		C	
VCKYCZ1CF104Z	18- 38	AB		C	
"	26- 36	AB		C	
"	27- 36	AB		C	
VCKYCZ1EF223Z	18- 39	AA		C	
VCKYCZ1HB102K	18- 40	AA		C	
"	26- 37	AA		C	
"	27- 37	AA		C	
VCKYCZ1HB222K	18- 41	AA		C	
VCKYCZ1HF103Z	26- 38	AA		C	
"	27- 38	AA		C	
VCQYNU1HM103K	18- 42	AA		C	
VHDDA204K//-1	18- 45	AC		B	
VHDDAN202K//-1	18- 43	AB		B	
VHDDAP202K//-1	18- 44	AB		B	
VHDDAP202U//-1	26- 39	AB		B	
"	27- 39	AB		B	
VHDDSS133//-1	18- 46	AA		B	
VHDM1FL20U+-1	18- 48	AC		B	
VHDM704A//-1	18- 47	AC		B	
VHDRB451F//-1	26- 40	AD		B	
"	27- 40	AD		B	
VHDRLS73///-1	26- 41	AA		B	
"	27- 41	AA		B	
VHEHSZ3B3///-1	18- 49	AB		B	
VHERD22FB///-1	18- 50	AD		B	
VHi28F081L06F	15- 58	BE		B	
VHi28F322L03F	12- 54	BR		B	
VHi28F322L04F	12- 55	BR		B	
VHi28F322L15F	12- 54	BU		B	
VHi28F322L16F	12- 55	BU		B	
VHi65946P07-1	26- 42	BA		B	
"	27- 42	BA		B	
VHi74LCX08MTC	26- 43	AE		B	
"	27- 43	AE		B	
VHi74LCX14MTC	26- 44	AE		B	
"	27- 44	AE		B	
VHi74LCX244MT	26- 45	AG		B	
"	27- 45	AG		B	
VHi74LCX32MTC	26- 46	AE		B	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
VHi74LCX32MTC	27- 46	AE		B	
VHi74LVX16128	26- 47	AP		B	
"	27- 47	AP		B	
VHi74VHCT240X	18- 63	AF		B	
VHi74VHCT244X	18- 64	AF		B	
VHi90LV17AW-1	26- 48	AP		B	
"	27- 48	AP		B	
VHiD82805GN-1	18- 51	BA		B	
VHiDS14C238//	26- 49	AT		B	
"	27- 49	AT		B	
VHiEEP64-120P	26- 50	AW		B	
"	27- 50	AW		B	
VHiEES04L400P	18- 52	AG		B	
VHiFS781BZB-1	18- 53	AP		B	
"	18- 54	AP		B	
VHiH8S2322R-1	18- 54	AZ		B	
VHiHG73C095-1	26- 51	AY		B	
"	27- 51	AY		B	
VHiKS0U1347-1	26- 52	BN		B	
"	27- 52	BN		B	
VHiLCX157MT-1	26- 53	AG		B	
"	27- 53	AG		B	
VHiLCX16244-1	26- 54	AM		B	
"	27- 54	AM		B	
VHiLCX16245-1	26- 55	AM		B	
"	27- 55	AM		B	
VHiLCX16373-1	26- 56	AM		B	
"	27- 56	AM		B	
VHiLCX74MTC-1	26- 57	AE		B	
"	27- 57	AE		B	
VHiLM324D+-1	18- 55	AE		B	
VHiLM339D+-1	18- 56	AE		B	
VHiLM393D+-1	26- 58	AE		B	
"	27- 58	AE		B	
VHiLVT240MT-1	26- 59	AL		B	
"	27- 59	AL		B	
VHiLVX240SJ-1	18- 57	AG		B	
VHiM87J4810-1	26- 60	BK		B	
"	27- 60	BK		B	
VHiMTD13611-1	18- 58	AR		B	
VHiN2370R04-1	26- 61	AF		B	
"	27- 61	AF		B	
VHiN2370R33-1	26- 62	AF		B	
"	27- 62	AF		B	
VHiN2391D25-1	26- 63	AG		B	
"	27- 63	AG		B	
VHiNJM317DL-1	26- 64	AK		B	
"	27- 64	AK		B	
VHiNJM7805A-1	18- 59	AH		B	
VHiNJU6356E-1	26- 65	AK		B	
"	27- 65	AK		B	
VHiPi6C2309-1	26- 66	AR		B	
"	27- 66	AR		B	
VHiPM2500+-1	26- 67	BP		B	
"	27- 67	BP		B	
VHiPST598DN-1	26- 68	AF		B	
"	27- 68	AF		B	
VHiPST598iN-1	26- 69	AF		B	
"	27- 69	AF		B	
VHiSD4M16L1-1	26- 70	AZ		B	
"	27- 70	AZ		B	
VHiSD8M16L1-1	26- 71	BB		B	
"	27- 71	BB		B	
VHiSR1024-7LL	26- 72	AU		B	
"	27- 72	AU		B	
VHiT4955A20-1	26- 73	BF		B	
"	27- 73	BF		B	
VHiTA7291S/-1	18- 60	AF		B	
VHiTD62003AP1	18- 61	AG		B	
VHiTD62503F/-	18- 62	AG		B	
VHiTD62503F-1	26- 74	AF		B	
"	27- 74	AF		B	
VHP1LHEE-002A	18- 65	AC		B	
"	26- 75	AC		B	
"	27- 75	AC		B	
VHV1608C2701C	26- 76	AC		B	
"	27- 76	AC		B	
VHViCPS1.2/-1	18- 66	AF		B	
"	26- 77	AF		B	
"	27- 77	AF		B	
VRD-HT2EY911J	18- 67	AA		C	

CAUTION FOR BATTERY REPLACEMENT

- (Danish) ADVARSEL !
Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.
- (English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.
- (Finnish) VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.
- (French) ATTENTION
Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.
- (Swedish) VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.
- (German) Achtung
Explosionsgefahr bei Verwendung inkorrektter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CAUTION FOR BATTERY DISPOSAL

- (For USA,CANADA)
Contains lithium-ion battery. Must be disposed of properly.
Remove the battery from the product and contact
federal or state environmental
agencies for information on recycling and disposal options.

SHARP

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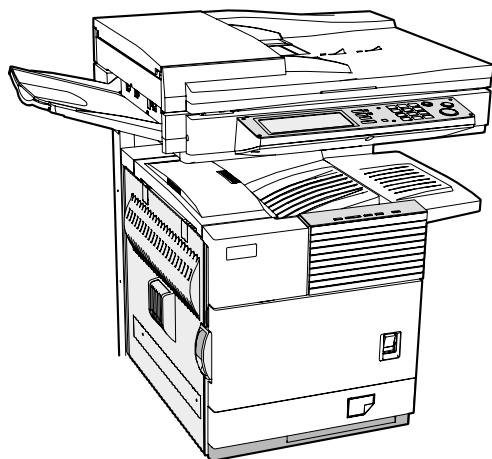
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Products Quality Assurance Department
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2002 May Printed in Japan (N)

SHARP SERVICE MANUAL

CODE : 00ZARM350UA1E



LASER PRINTER

AR-M350U/M450U MODEL AR-M350N/M450N

OPTIONS AR-P14

[1] INTRODUCTION

The AR-M350U/M450U and AR-M350N/M450N are minor change models based on the AR-M350/M450.

This service manual only provides information on these minor changes.

In addition to this service manual, the documents listed below are required to properly maintain these machines.

•AR-M350/M450	Service Manual : 00ZARM350/A1E	Parts Guide : 00ZARM450/P1E	Circuit Diagram : 00ZARM350/C1/
•AR-P350/P450	Service Manual : 00ZARP350/A2E	Parts Guide : 00ZAR350LPP1/	Circuit Diagram : 00ZARP350/C1/
•AR-NC5J	Service Manual : 00ZARNC5J/A1E		


Note: Depending on the option, additional service documentation may be required.

[2] LIST OF DIFFERENCES FROM AR-M350/M450

A.Product composition

	Model Name	Printer Option Model	NIC Standard Model	Note
Base Engine		AR-M350U AR-M450U	AR-M350N AR-M450N	
Print Speed		35ppm 45ppm	35ppm 45ppm	
Multi Function Controller	AR-M11	Not Available	Standard	
Multi Function Controller(for U-Model)	Not Available	Standard	Not Available	Not registered as a product
Print Server Card	AR-NC5J	Not Available	Standard	
Printer Extension Kit	AR-P14	Option	Not Available	*1

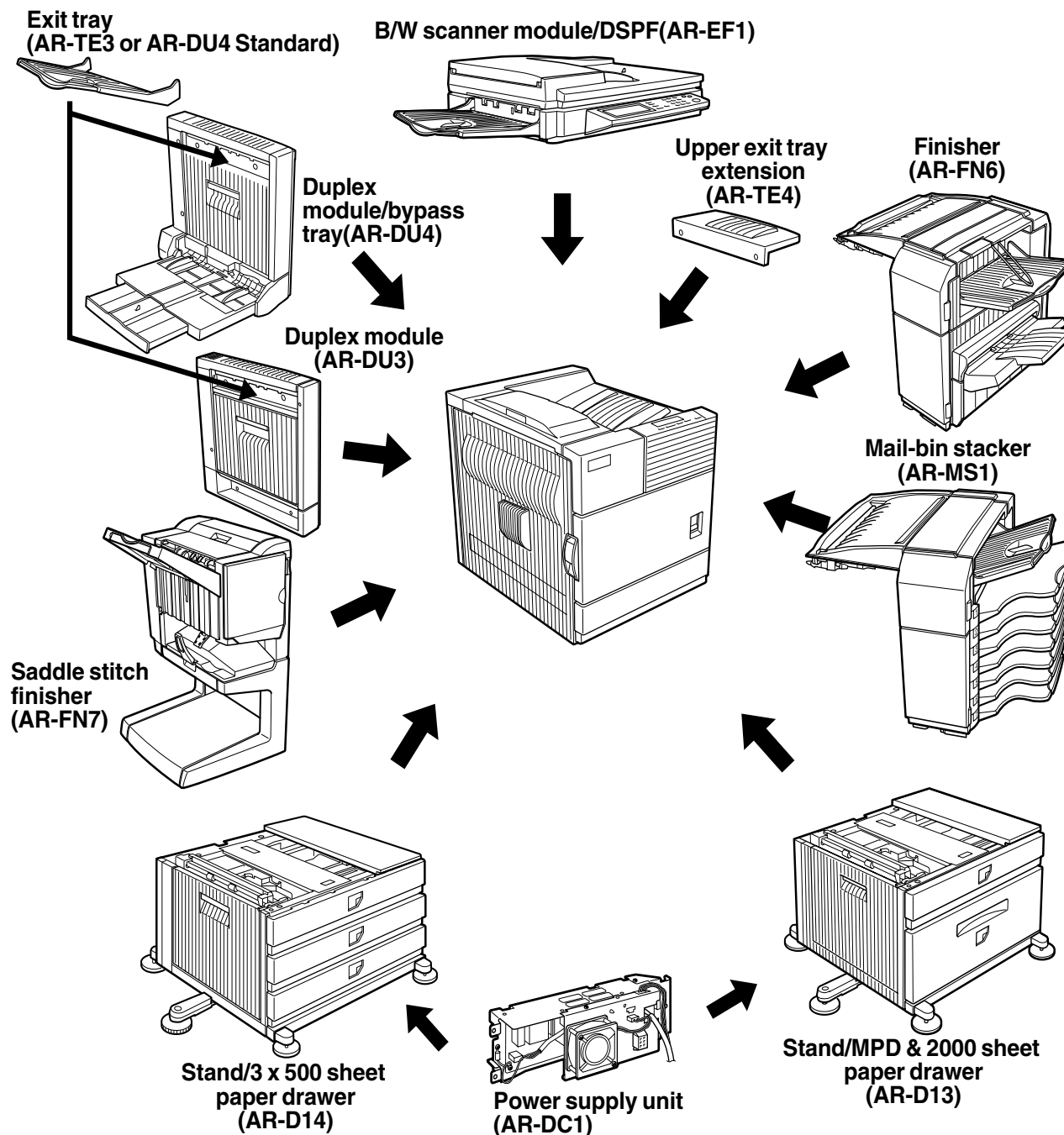
*1: Installation of the AR-P14 on the AR-M350U/M450U will provide similar functionality to that of the AR-M350/M450.

Parts marked with “” are important for maintaining the safety of the set.

Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

[3] CONFIGURATION

1.System Configurations



2. Standard

Category	Model Name	Other options required for the installation/mounting. (Options must be ordered separately.)	Remarks
MFP model (35ppm)	AR-M350	• B/W Scanner module/DSPF (AR-EF1)	
MFP model (45ppm)	AR-M450	• Scanner Rack (AR-RK1)	
MFP model (35ppm)	AR-M350U	• Stand/MPD&2000 sheet paper drawer (AR-D13) or Three paper drawer stand (AR-D14)	
MFP model (45ppm) (Without network printer function)	AR-M450U	• Power supply unit (AR-DC1)	
MFP model (35ppm) (With NIC card (standard))	AR-M350N		
MFP model (45ppm)	AR-M450N		

3. List of combination of peripheral devices

A.AR-M350U/M450U

As shown in the table below, some other peripheral devices (B) may be needed for installation of a peripheral device (A) and some peripheral devices cannot be installed together.

		B																							
		B/W scanner module/DSPF	Scanner rack	Stand/3 x 500 sheet paper drawer	Stand/MPD & 2000 sheet	Duplex module/bypass tray	Duplex module	Saddle stitch finisher	Finisher	Mail-bin stacker	Exit tray	Upper exit tray extension	Punch unit	Multi-function controller board	Print server card	PS3 expansion kit	Network scanner expansion kit	Facsimile expansion kit	Fax memory (8 MB)	Power supply unit	Hard disk drive	Network printer kit			
Related for scanner feature																									
	B/W scanner module/DSPF	AR-EF1	—	○	○ ^{*1}									○						○					
	Scanner rack	AR-RK1	○	—	○ ^{*1}									○						○					
Related for paper feed unit																									
	Stand/3 x 500 sheet paper drawer	AR-D14		—	×															○					
	Stand/MPD & 2000 sheet paper drawer	AR-D13			×	—														○					
	Duplex module/bypass tray	AR-DU4			○ ^{*1}	—		×					×							○ ^{*2}					
	Duplex module	AR-DU3			○ ^{*1}		—													○ ^{*2}					
Output units																									
	Saddle stitch finisher	AR-FN7			○ ^{*1}	×	○	—	×		×	×								○					
	Finisher	AR-FN6			○ ^{*1}			×	—	×		×	×							○					
	Mail-bin stacker	AR-MS1			○ ^{*1}				×	—		×								○					
	Exit tray ^{*4}	AR-TE3				○ ^{*1}	×	×	×	—		×													
	Upper exit tray extension	AR-TE4						×	×		—														
	Punch unit	AR-PN1			○ ^{*1}	×	○	○	×		×		—							○					
Related for extension of functions and others																									
	PS3 expansion kit	AR-PK1														—									
	Network scanner expansion kit	AR-NS2	○	○	○ ^{*1}									○		—									
	Facsimile expansion kit	AR-FX5	○	○	○ ^{*1}													—							
	Fax memory (8 MB)	AR-MM9	○	○	○ ^{*1}													○	—	○					
	Power supply unit	AR-DC1			○ ^{*1}															—					
	Hard disk drive	AR-HD3																			—				
	Multi-function controller board ^{*5}	AR-M11	○	○	○ ^{*1}									—								×			
	Print server card ^{*6}	AR-NC5J													—		○ ^{*1}					○ ^{*1}			
	Network printer kit	AR-P14													○							—			

○ = Must be installed together.

○^{*1} = Any of the units must be installed together.

○^{*2} = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.

×

*3 = Standard

*4 = AR-DU4 Standard

*5 = Attachment of the AR-P14 provides the similar functions.

*6 = Not Available

B.AR-M350N/M450N

As shown in the table below, some other peripheral devices (B) may be needed for installation of a peripheral device (A) and some peripheral devices cannot be installed together.

A

		B																							
Related for scanner feature		B/W scanner module/DSPF	Scanner rack	Stand/3 x 500 sheet paper drawer	Stand/MPD & 2000 sheet	Duplex module/bypass tray	Duplex module	Saddle stitch finisher	Finisher	Mail-bin stacker	Exit tray	Upper exit tray extension	Punch unit	Multi-function controller board	Print server card	PS3 expansion kit	Network scanner expansion kit	Facsimile expansion kit	Fax memory (8 MB)	Power supply unit	Hard disk drive	Network printer kit			
B/W scanner module/DSPF	AR-EF1	—	○	○ ^{*1}										○						○					
Scanner rack	AR-RK1	○	—	○ ^{*1}										○						○					
Related for paper feed unit																									
Stand/3 x 500 sheet paper drawer	AR-D14			—	×															○					
Stand/MPD & 2000 sheet paper drawer	AR-D13			×	—															○					
Duplex module/bypass tray	AR-DU4			○ ^{*1}	—		×						×							○ ^{*2}					
Duplex module	AR-DU3			○ ^{*1}	—															○ ^{*2}					
Output units																									
Saddle stitch finisher	AR-FN7			○ ^{*1}	×	○	—	×		×	×	×								○					
Finisher	AR-FN6			○ ^{*1}			×	—	×		×	×								○					
Mail-bin stacker	AR-MS1			○ ^{*1}				×	—		×									○					
Exit tray ^{*4}	AR-TE3				○ ^{*1}	×	×	×	×	—		×													
Upper exit tray extension	AR-TE4						×	×		—															
Punch unit	AR-PN1			○ ^{*1}	×	○	○	×		×		—								○					
Related for extension of functions and others																									
PS3 expansion kit	AR-PK1															—									
Network scanner expansion kit	AR-NS2	○	○	○ ^{*1}										○		—									
Facsimile expansion kit	AR-FX5	○	○	○ ^{*1}														—							
Fax memory (8 MB)	AR-MM9	○	○	○ ^{*1}														○	—	○					
Power supply unit	AR-DC1			○ ^{*1}																—					
Hard disk drive	AR-HD3																				—				
Multi-function controller board ^{*3}	AR-M11	○	○	○ ^{*1}										—											
Print server card ^{*3}	AR-NC5J														—										
Network printer kit ^{*6}	AR-P14																								

○ = Must be installed together.

○^{*1} = Any of the units must be installed together.

○^{*2} = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.

×

*3 = Standard

*4 = AR-DU4 Standard

*6 = Cannot be attached.

[4] SPECIFICATIONS

1. Basic Specification

A. Base Engine (AR-M350U/M350N/M450U/M450N)

(1) Form

AR-M350U/M350N/M450U/M450N	Console type
----------------------------	--------------

(2) Engine speed

Paper size	AR-M350U/N	AR-M450U/N
A4, 8.5" x 11"	35ppm	45ppm
A5R/5.5" x 8.5"R	35ppm	45ppm
B5	35ppm	45ppm
B4/8.5" x 14	20ppm	22ppm
A3/11" x 17"	17ppm	20ppm

(3) Engine composition

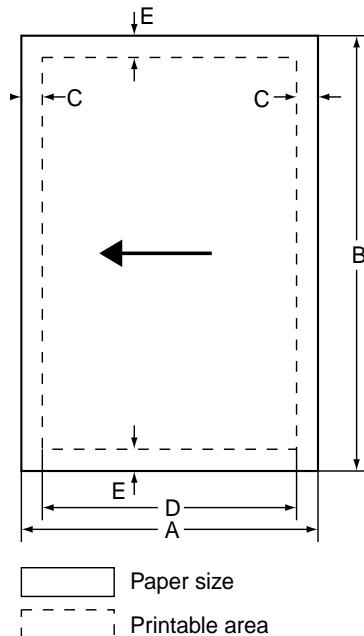
Photoconductor type	OPC (diameter of photoconductor : ø30mm)
Record method	Electrophotograph (laser)
Development method	Dry-type dual-component magnetic brush development
Charge method	Charged saw-tooth method
Transfer method	Transfer roller
Cleaning method	Counter blade
Fusing method	Heat roller
Used toner disposal	Toner recycling system

(4) Engine resolution

Resolution	Write :600dpi
Smoothing	Write :1200dpi equivalent
Gradation	Write :2 levels

(5) Printable area

The print area of this product is shown below.



If a printer driver for Windows or Macintosh is used for printing, the printable area will be smaller. The actual printable area depends on the printer driver to be used.

(in mm)

Paper size	A	B	C	D	E
A3	297	420	4	289	4
B4	257	364	4	242	4
A4	210	297	4	202	4
B5	182	257	4	168	4
A5	148	210	4	140	4
Japanese postcard	100	148	4	92	4
Ledger	279	432	4	271	4
Legal	216	356	4	208	4
Foolscap	216	330	4	208	4
Letter	216	279	4	208	4
Executive	184	267	4	183	4
Invoice	140	216	4	132	4
Com-10(envelope)	105	241	4	97	4
C5(envelope)	162	229	4	154	4
Monarch(envelope)	98	191	4	90	4
DL(envelope)	110	220	4	102	4
ISO B5(envelope)	176	250	4	168	4

(6) Warm-up

Warm-up time	less than 80 seconds
Pre-heat requirement	Required
Jam recovery time	Target: about 30 seconds (Under standard condition of 60 seconds left after side cover opening, polygon motor halt)

(7) Power source

Voltage	100V system	200V system
	100-127V	220-240V
Frequency	50/60Hz	50/60Hz

(8) Power consumption

	AR-M350U/N	AR-M450U/N
Max. Power consump.	1440W	1440W

(9) Energy Star benchmark

	AR-M350U/N	AR-M450U/N
Low power mode	40W	75W
Transition time to Low power mode	60min	60min

(10) Noise

	AR-M350U/N	AR-M450U/N
At working	less than 6.8B	less than 6.8B
At waiting mode	less than 5.0B	less than 5.0B

* Showing noise benchmark in each model as a whole system.

(11) Dimensions

External dimensions (WxDxH)	428x552x469 (Only main unit) (mm) 16.9"x21.7"x18.5"
Occupied space dimensions (WxD)	963x685 (mm) *1 25.7"x22.3"
Weight	AR-M350U/M450U:Approx.38.9kg (Only main unit) Approx.99kg *1 AR-M350N/M450N:Approx.39.9kg (Only main unit) Approx.100kg *1

*1: With B/W scanner module/DSPF, Scanner rack, Large capacity paper feed desk, Power supply unit and Upper exit tray extension

B. Document Feeding Equipment

(1) One-drawer tray (included in the base engine)

Paper feed method	One-drawer tray	
Sizes to be fed	A4, B5, 8.5" x 11"	
Paper capacity	500 sheets (at 80g/m ²)	
Media available for paper feeding	Plain paper 60 - 105g/m ² , 16 - 28lbs	
Paper type	Plain, recycled, pre-printed, pre-punched, color, letter head	
Paper size switching	To be switched by user (paper size to be entered from the operation panel).	
Dehumidification heater	Not provided	
Balance detection	Provided (paper empty and 3 steps)	
Default size setting	100V system	200V system
	8.5" x 11"	A4
Mounting/demounting of the tray	Provided	

C. Output Equipment

(1) Face-down Exit Tray (included in the base engine)

Output position/method	Face-down output at the upper side of main unit
Output paper capacity	400 sheets (80g/m ² sheet)
Output paper size	A3, B4, A4, A4R, B5, B5R, A5R 11" x 17", 8.5" x 14", 8.5" x 13", 8.5" x 11", 8.5" x 11" R, 5.5" x 8.5" R Executive, postal card, Monarch (98 x 191) Com-10 (105 x 241), DL (110 x 220), C5 (162 x 229), ISO B5 (176 x 250)
Spec of media for paper output	Tracing paper : 52 ~ 59g/m ² / 14 ~ 15lbs Plain paper : 60 ~ 128g/m ² / 16 ~ 34lbs Index paper : 176g/m ² / 47lbs Cover paper : 205g/m ² / 54 ~ 55lbs Transparency film
Remaining paper detection	Not provided
Exit tray full detection	Provided

2. Specific Function

A. Printer Function

(1) Platform

IBM PC/AT (Include compatible machine)
Macintosh (680x0), Power Macintosh, iMac, G3Macintosh

* For Macintosh OS, the PS3 expansion kit and NIC card are required.

(2) Support OS

Custom PS	Windows 95/98/Me/XP
	Windows NT 4.0
	Windows 2000
Custom PCL5e/6(XL)	Windows 95/98/Me/XP
	Windows NT 4.0
	Windows 2000
SPDL	Windows 95/98/Me/XP
	Windows NT 4.0
	Windows 2000
	Mac OS 8.5.1 - Mac OS 9

* For Macintosh OS, the PS3 expansion kit and NIC card are required.

(3) PDL emulation

PCL6, PCL5e compatible, PostScript Level 2, PostScript 3 compatible (PS3 expansion kit is required.)
--

(4) Print Function

a. General

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Copies	1 - 999	1 - 999	1 - 999	1 - 999
Orientation	Yes	Yes	Yes	Yes
Duplex print	Yes	Yes	Yes	Yes
Saddle stitch	Yes	Yes	No	N/A
Binding edge	Left/top/ right	Left/top/ right	Long/short	Long/short
N-up	2/4/6/8	2/4/6/8	2/4*3*4	2/4/6/9/16
N-up direction	Fixed	Fixed	Fixed	Selectable
N-up border line	Yes	Yes	Yes(always)	Yes

b. Paper input

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Paper size	Yes	Yes	Yes	Yes
Custom paper size	1 size	1 size	3 sizes*3*5	N/A
Source selection	Yes	Yes	Yes	Yes
Different first page	Yes	Yes	N/A	Yes
Transparency inserts	Yes	Yes	N/A	Yes

c. Paper output

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Output tray selection	Yes	Yes	Yes	Yes
Mail bin	Yes	Yes	Yes	Yes
Staple	Yes	Yes	Yes	Yes
Offset	Yes	Yes	Yes	Yes
Punch	Yes	Yes	Yes	Yes

d. Graphic

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resolution	600/300 dpi	600 dpi	600 dpi	600 dpi
Halftone	N/A	Yes	Yes	N/A
Graphic mode	Yes	N/A	N/A	N/A
Smoothing	Yes	Yes	Yes	Yes
Toner save	Yes	Yes	Yes	Yes
Photo enhancement	Yes*8	Yes	N/A	N/A
Negative image	N/A	Yes	Yes	Yes
Mirror image	N/A	Horizontal/ vertical	Horizontal	Yes
Zoom	N/A	N/A	Yes	Yes
Fit to page	Yes	Yes	N/A	N/A

e. Font

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resident font	45 fonts	136 fonts	136 fonts*6	35 fonts
Download font	Bitmap TrueType, Graphic	Bitmap Type1 TrueType	Bitmap Type1 TrueType	N/A

f. Others

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Watermark*7	Yes	Yes	Yes	Yes
Overlay	Yes	Yes	N/A	N/A
Job retention*1	Yes	Yes	N/A	Yes
Account control	Yes	Yes	N/A	Yes
Custom settings	Yes	Yes	N/A	N/A
Automatic configuration*2	Yes	Yes	N/A	Yes
Job end notification	Yes	Yes	N/A	N/A

* 1 In the models without a hard disk drive, an optional hard disk drive must be installed .

* 2 Functions when peripheral devices are installed.

* 3 Not supported in the Windows NT 4.0 environment.

* 4 2/4/6/9/16 is supported in the Windows 2000 environment.

* 5 Only one size is supported in the Windows 2000 environment.

* 6 Only 35 fonts are supported in the Windows NT 4.0 environment.

* 7 This function is limited for PPD.

* 8 PCL6 only

(5) Compatibility

PCL 5e compatibility	Target for PCL5e is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PCL commands are not necessarily included in the compatibility.
PCL6 compatibility	Target for PCL6 is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PCL commands are not necessarily included in the compatibility.
PostScript Compatibility	Roman PostScript is targeted to be compatible with Adobe PostScript as performed in HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.

B. Expanded RAM

Installation of an expanded RAM will avoid the following status.

- 1) Time out error reduction
- 2) Spool time reduction
- 3) Avoidance of VM error / memory full

Use commercially available RAM with the following specifications.

Note: If RAM used does not meet the follow specifications, the copier may not recognize the additional RAM or its capacity correctly.

<Spesification>

DIMM TYPE	168pin 3.3V Unbuffered SDRAM DIMM Non-ECC
DIMM capacity	64MByte, 128MByte, 256MByte
CAS LATENCY	CL=2
SDRAM CLOCK	For PC100, PC133
SPD	Supporting
Parity	Not support
ECC	Not support

<Operation-assured Memory> (As of March / 2001)

Manufacture	Capacity	Model name	RAM CHIP name	Note
Kingston Technology	128MB	KVR133X64C3/ 128	HYB39S64800BT -7.5	
	128MB	KVR133X64C3 -128	D456821G-A75 -9JF	
	256MB	KVR133X64C3 -256	HY57V28820AT-H	
Viking Compornents	64MB	VIK8641CL2	μPD456841G5 -A80-9JF	
	64MB	VIK8641CL2	D456841G5-A80 -9JF	
	128MB	VIK6642CL2	TC59SM708FT-80	
	128MB	VIK6642CL2	D4564841G5-A80 -9JF	
	256MB	VIK2642CL2	TC59SM708FT-80	
Memory Card Technology	64MB	DM864VS65804X -7G	GM72V66841XT75	
	128MB	DM1665VS65804 X-7G	HY57V64820HG	

C. Scanner function

*Scanner function, the NIC card and Network Scanner kit are required.

(1) Scanner function

Scanner mode	Scan to E-mail (Internet FAX) Scan to Server (Client PC)
--------------	---

(2) Support System

Embedded server	SMTP server FTP server
Protocol	TCP/IP

(3) Support Image

Format	TIFF, PDF, TIFF-F * Selectable for each page
Compression method	Uncompressed, G3(1-dimension) *1, G4 *2 *1 G3 (1-dimension) = MH (Modified Huffman) *2 G4 = MMR (Modified MR)

(4) Transmission Mode

DSPF/OC transmission switching	Available (Switching during the reading is not feasible)
-----------------------------------	---

(5) Image Process

Half tone reproduction	Equivalent to 256 levels
Exposure adjustment	Light / Auto / Dark
Quality selection	Half-tone ON/OFF
Resolution*	Normal (200x200dpi) Fine (300x300dpi) Super fine (400x400dpi) Ultra fine (600x600dpi) Varies with the file type/transmission method

(6) Original Memory

Standard	Commonly use ERDH area of memory.
Memory expansion	Special : As per ERDH memory

(7) Specified Destination

Specified destination	Specifying by one-touch or group
One-touch*	Max. 500 destinations (in conjunction with the one-touch dial of FAX) Max. 100 destinations can be registered for FTP and Desktop.
Group*	To be registered in one-touch
Program	Available

(8) Specified Multiple Destinations

Specified destination	Specifying by one-touch or group
No. of registration	Max. 300 items (in conjunction with those of FAX)
Sequential broadcasting	Available (E-mail only. It is not available for FTP/Desktop.)
Simultaneous FAX transmission	Available (Specifying multiple destinations of FAX, E-mail or FTP and broadcasting by a single scan)

O : Available

(9) Functions

Transmitting functions	Rotating transmission	Available (to be matched with FAX specification)
	Long length original transmission	Not Available
	Verification stamp function	Option
Report/list functions	Transmit/receive record	Available
	Transmit/receive result	Available
	Address/phone directory list	Available
	Group list	Available
	ID/sender list	Available
	Program list	Available

D. Copy function

(1) Copy Speed

	AR-M350U/N			AR-M450U/N		
	Actual	Reduction	Enlargement	Actual	Reduction	Enlargement
A4, 8.5"x11"	35	35	35	45	45	45
A4R, 8.5"x11"R	25	25	25	30	30	30
A5R, 5.5"x8.5"R, Invoice-R	35	35	35	45	45	45
B5	35	35	35	45	45	45
B5R, Executive-R	25	25	25	30	30	30
B4, 8.5"x14"	20	20	20	22	22	22
A3, 11"x17"	17	17	17	20	20	20
Extra, Envelope	17	17	17	20	20	20
Japan P/C	In case of printing on post card, engine speed can vary with system configuration, because next paper is fed after machine completely output previous page.					

* Figures in reduction/enlargement are represented by those at the ratio to show slowest speed

(2) First Copy Time

Conditions: A4 or 8.5"x11"P from front tray of PPC, without HDD and with polygon motor running.

	AR-M350U/N	AR-M450U/N
Document glass *1	Less than 5.3 seconds	Less than 4.6 seconds
DSPF	Less than 6.0 seconds	Less than 5.3 seconds

*1 During OC/high-speed mode

(3) Job Speed

	AR-M350U/N	AR-M450U/N
S → S *1	33 cpm (94%)	42 cpm (93%)
S → D *2	32 cpm (91%)	40 cpm (88%)
D → D *3	32 cpm (91%)	40 cpm (88%)

*1 S → S : A4 / 8.5" x 11"P original 5 sheets copy 5sets

*2 S → D : A4 / 8.5" x 11"P original 10 sheets copy 5sets

*3 D → D : A4 / 8.5" x 11"P original 5 sheets (10 pages) copy 5sets

Note: First copy time has been factored into calculation resulting in reduced CPM.

(4) Continuous Copy

Max. multiple number	999 pages
----------------------	-----------

(5) Copy Ratio

Copy ratio	AB series : 25%, 70%, 81%, 86%, 100%, 115%, 122%, 141%, 400% Inch series : 25%, 64%, 77%, 100%, 121%, 129%, 400%
Zoom	25 - 400% 25 - 200% (Copy from DSPF)
Independent scaling	Not provided

(6) Exposure/Copy Quality Process

Exposure mode	Binary: Text(auto/manual), Text/photo, Photo 256 levels: Not provided
Manual steps	9 steps
Smoothing	Standard
Toner save mode	Standard

(7) Copy Function

Function	APS	Standard Function
	AMS	Standard Function
	Paper type select	Standard Function (By type setting)
	Auto tray switching	Standard Function
	Rotation copy	Standard Function
	Electronic sort	Standard Function
	Rotation sort	Not provided
	Reserved copy	Standard Function
	Prior tray setting	Not provided
	Recall/register of program	Standard Function
	Proof copy	Not provided
	Preheat function	Standard Function (To be set up by key operator)
	Auto power shut-off function	Standard Function (To be set up by the key operator program)
	Account control	Standard Function (100 accounts)
	Communication support (RIC)	Standard Function
	Card counter support	Only provided the connector
	Coin vendor support	Only provided the connector
Special function	Margin shift	Standard Function
	Edge erase / Center erase	Standard Function
	Dual page copying	Standard Function
	Covers	Not provided
	Transparency insert	Not provided
	Centering	Not provided
	Multi shot (N in 1)	Standard Function (2 in 1 / 4 in 1)
	Pamphlet copy	Standard Function
	2-sided copy orientation change	Standard Function
	Large capacity original mode	0 (Max. 140 pages)
	B/W reverse	Not provided
	Shading	Not provided
	Mirror image	Not provided
	Repeat	Not provided
	Date stamp	Not provided
	Stamp	Not provided
	Page stamp	Not provided
	Zaurus print	Not provided

[5] CONSUMABLE PARTS

1. Supply system table

Note: The consumable parts are the same as those of the AR-M350/M450 and the AR-P350/P450.

A. USA

NO	Name	Content	Life	Product name	Remark
1	Toner CA(Black)	Toner(Toner : Net Weight 814g)	27K	AR-450NT (*1 AR-450NT-J)	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	100K	AR-450ND	
3	Drum	Drum x1	50K	AR-450DR	
4	50K maintenance kit	Cleaner blade x1 Drum separation pawl x4 Screen grid x1 Toner reception seal x1 Side malt F x1 Side malt R x1 Charging plate x1	50K	AR-450KC1	
5	100K maintenance kit	Transfer roller x1 Discharging plate x1 Paper dust removing unit x1 DV blade x1 DV side seal F x1 DV side seal R x1	100K	AR-450KA1	
6	Upper heat roller kit	Upper heat roller x1 Fusing separation pawl (Upper) x4	200K	AR-450UH	
7	Lower heat roller kit	Lower heat roller x1 Fusing separation pawl (Lower) x2	200K	AR-450LH	
8	Cleaner blade	Cleaner blade x10	50K(x10)	AR-450CB	AR-450CB=(AR-450BL)x10
9	Cleaning roller	Cleaning roller x10 Bearing x20	200K(x10)	AR-450CR	AR-450CR=(AR-450RC)x10
10	Staple cartridge	Staple cartridge x3	3000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
11	Staple cartridge	Staple cartridge x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

*1: For USA Government

Note1: Print on Master/individual carton:Toner/Developer in 2 languages (English/French), DR in 4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

B. Europe

NO	Name	Content	Life	Product name	Remark
1	Toner CA(Black)	Toner(Toner : Net Weight 814g)	27K	AR-450T	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	100K	AR-450DV	
3	Drum	Drum x1	50K	AR-450DM	
4	50K PM kit	Cleaner blade x1 Drum separation pawl x4 Screen grid x1 Toner reception seal x1 Side malt F x1 Side malt R x1 Charging plate x1	50K	AR-450KC	
5	100K PM kit	Transfer roller x1 Discharging plate x1 Paper dust removing unit x1 DV blade x1 DV side seal F x1 DV side seal R x1	100K	AR-450KA	
6	200K PM kit	Upper heat roller x1 Lower heat roller x1 Fusing separation pawl (Upper) x4 Fusing separation pawl (Lower) x2 Cleaning roller x1 Bearing x2	200K	AR-450KB	
7	Staple cartridge	Staple cartridge x3	3000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
8	Staple cartridge	Staple cartridge x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

2. Production number identification

A. Drum cartridge

The lot number, printed on the front side flange, is composed of 10 digits, each digit showing the following content:

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- 1 Number
For this model, this digit is 2.
- 2 Alphabet
Indicates the model conformity code. T for this model.
- 3 Number
Indicates the end digit of the production year.
- 4 Number or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.
- 5/6 Number
Indicates the production day on the month.
- 7 Number or X, Y, Z
Indicates the month of packing.
X stands for October, Y November, and Z December.
- 8/9 Number
Indicates the day of the month of packing.
- 10 Alphabet
Indicates the production factory. "A" for Nara Plant.

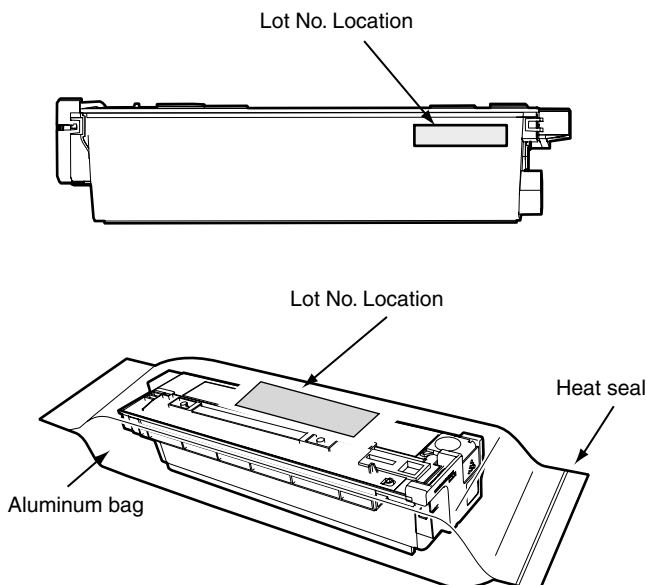
B. Toner cartridge

The lot number is composed of 7 digits, and each digit indicates as following.

The lot number shall be printed in the position shown below.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

- 1 Version number (A - sequentially revised)
- 2 Numeral figure
Indicates the end digit of the production year.
- 3 Alphabet
Indicates the production factory. (B for SOCC)
- 4 Destination code
- 5,6 Numeral figures
Indicates the production day.
- 7 Numeral figure or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.



C. Developer

The lot number is composed of 8 digit, and each digit indicates as following.

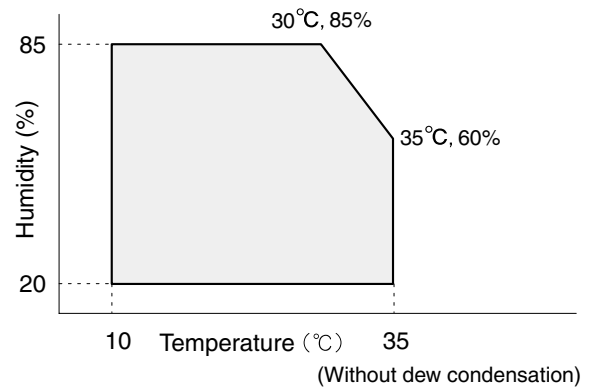
The lot number shall be printed on the bag.

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

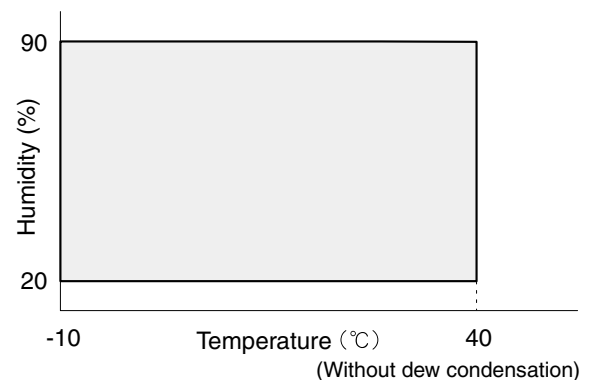
- 1 Alphabet
Indicates the production factory.
- 2 Figure
Indicates the production year.
- 3/4 Figure
Indicates the production month.
- 5/6 Figure
Indicates the production day.
- 7 Hyphenation
- 8 Figure
Indicates the production lot.

3. Environmental conditions

A. Operating conditions



B. Storage conditions



[6] UNPACKING AND INSTALLATION

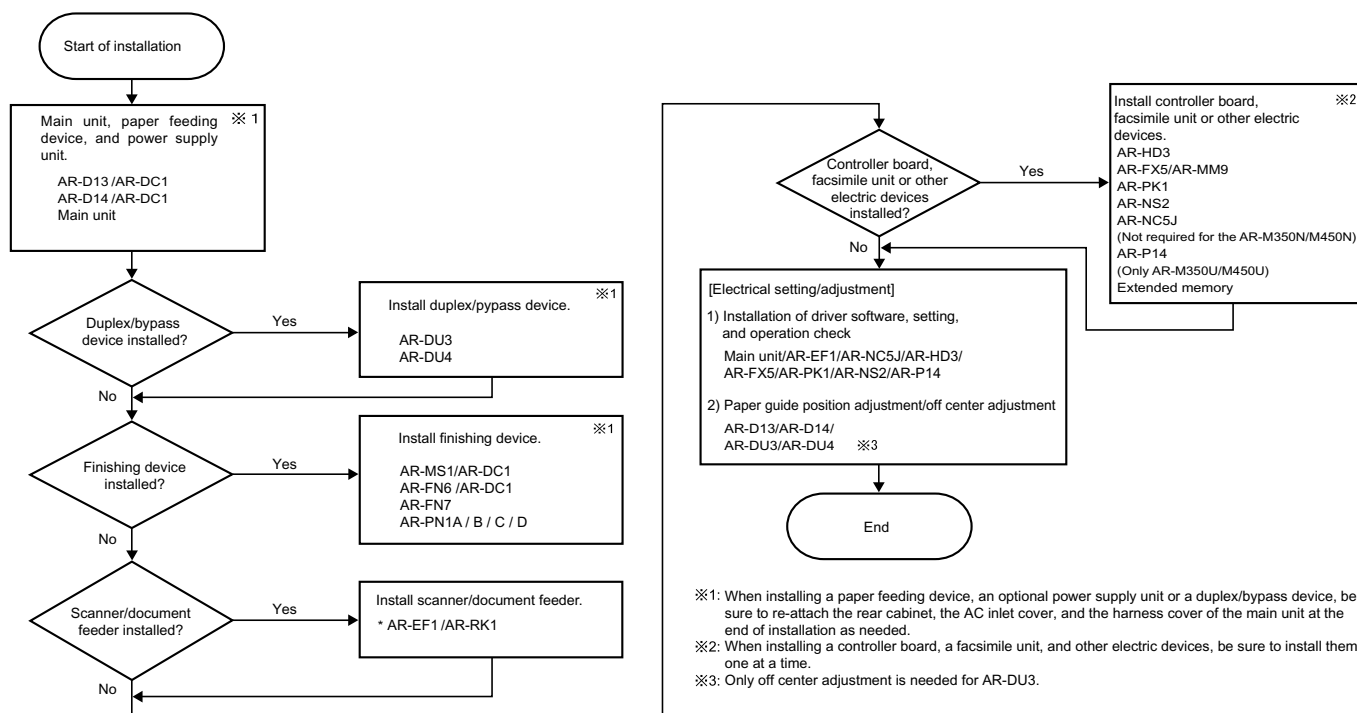
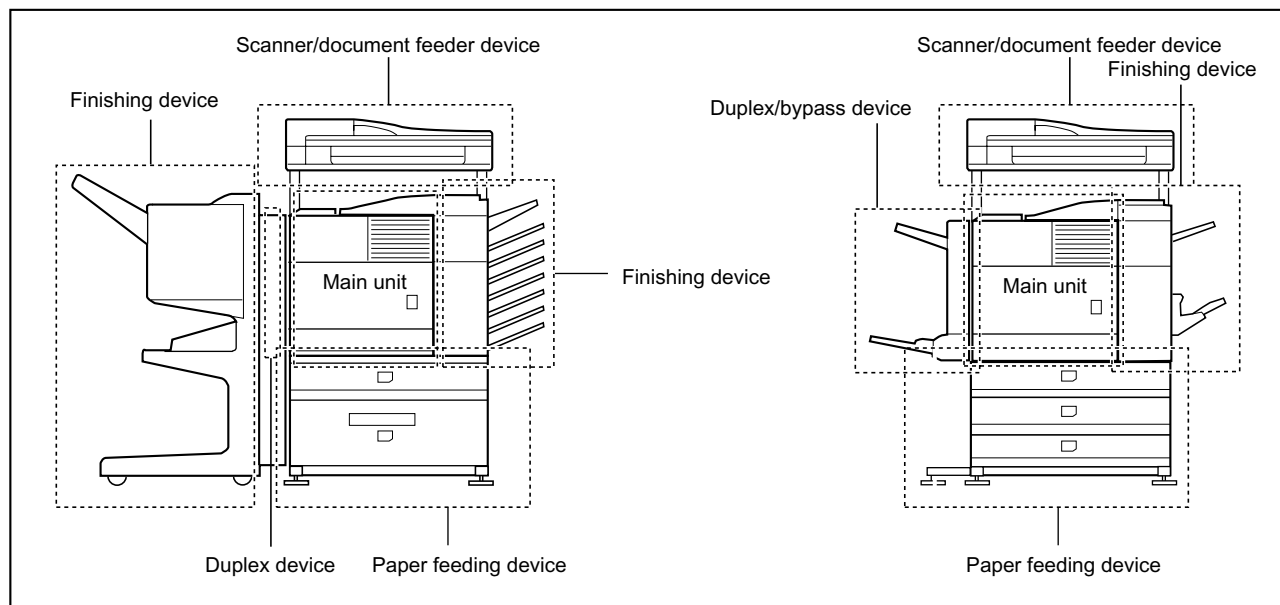
1. Installing procedure flowchart

There are many combinations between this machine and option units. For installing option units, observe the following procedures for efficiency.

To install the devices efficiently, follow the procedure below.

Some peripheral devices may have been installed as standard devices depending on the main unit model.

Part of descriptions and illustrations may be different.

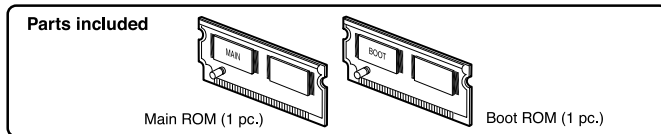


* When installing an option, refer to the Service Manual for that option and or the AR-M350 / M450 Service Manual.

2. AR-P14 installing procedure

<Before installation>

- * This installation procedure is provided for use with the AR-M350U/ M450U series.
- * To connect this machine to a network, a Print Server Card (NIC) AR-NC5J must be installed to the multi-function controller board in advance.



- * To enable the printer expansion function, the product key must be acquired.

The application number, machine serial number, and product key number are important information. Keep the above information for future reference.

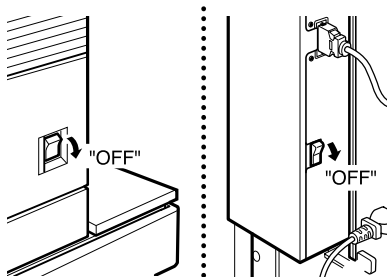
1) Mount the printer expansion kit ROMs to the control PWB.

<1>Turn off the main switch of the main unit of the printer

Turn the main switch located on the front side of the main unit to the "OFF" position.

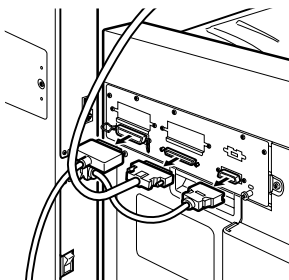
If the machine is equipped with a facsimile unit, also turn off the FAX power switch.

Then remove the power plug from the outlet.



<2>Remove the cables connected to the control PWB unit.

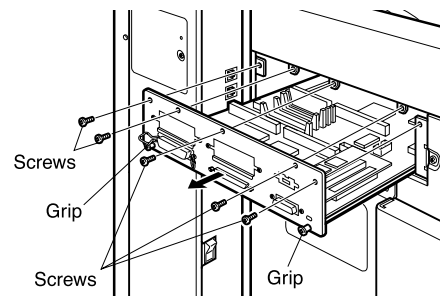
Remove all the cables connected to the control PWB unit of the main unit of the printer.



<3>Remove the control PWB unit.

Remove the five screws that fix the control PWB unit to the main unit of the printer.

Then, hold the two grips and pull out the control PWB unit to remove it from the main unit.

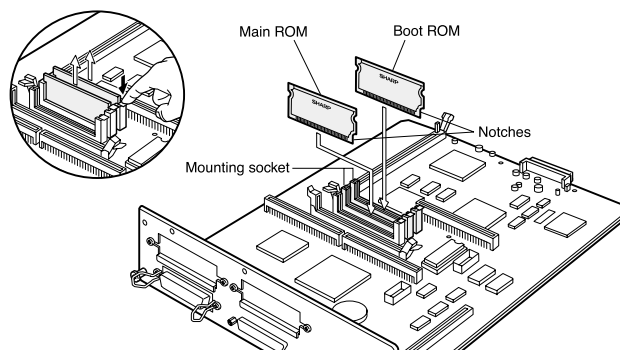


<4>Mount the printer expansion kit ROMs(2 pcs.)to the control PWB.

Remove the ROMs(main and boot ROMs)from the control PWB and replace them with the two ROMs(main and boot ROMs)of the printer expansion kit.

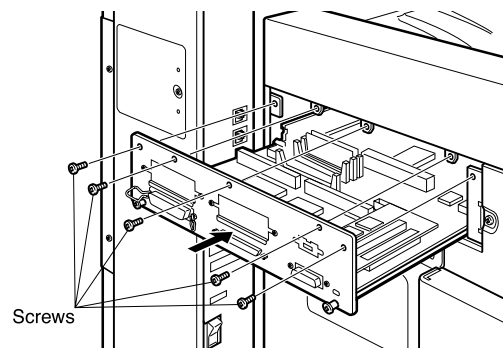
The main and boot ROMs are indicated with "MAIN" and "BOOT" on the labels on the ROMs respectively.

When mounting the printer expansion kit ROMs, insert them to the same positions in the same direction as those before replacement and ensure that the inserted printer expansion kit ROMs are locked with the fittings of the sockets.



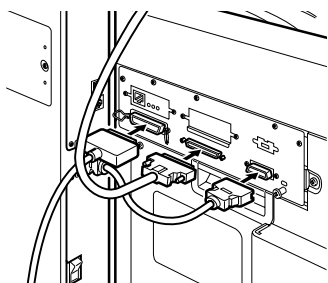
<5>Re-attach the control PWB.

Attach the control PWB to the main unit of the printer and fix it using five screws.



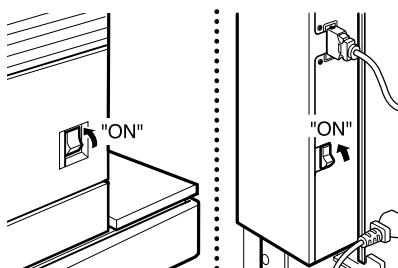
<6> Connect the cables to the control PWB.

Connect all the cables that have been removed in <2> to the original positions of the control PWB unit.



If another peripheral device must be installed, carry out the following steps at the end of the installation work.

2) Turn on the main switch of the main unit of the printer.
Insert the power plug of the main unit of the printer to the outlet.
Then, turn the main switch located on the front side of the main unit to the "ON" position.
If the machine is equipped with a facsimile unit, turn on the FAX power switch.



3) Prepare to enable the printer expansion function.

To enable the printer expansion function, use the keys on the operation panel to enter the product key.

For entry of the product key, see the key operator's guide of the operation manual for the main unit.

Carry out the network setting for the Print Server Card.

Use a key operator program to carry out the network setting for this machine. For this network setting, the customer's network environment must be checked. Consult the network administrator to carry out the setting.

In addition to the network setting for this machine, to use the machine in the network environment:

According to the customer's network environment, install the driver software from the CD-ROM supplied with this machine and use the utility software supplied with the Print Server Card to set the network printer for the server computer.

For installation in the server computer and network setting, see the operation manual supplied with the main unit.

This setting must be carried out by the network administrator or based on consultation with the network administrator.

4) To check the operation of the printer expansion function.

When the network settings and the driver settings are complete, perform a test print to check if printing can be performed successfully.

(When test printing is completed successfully, use the "list print" key operator program to print the network settings and keep the printout for future reference.)

Installation of AR-P14 is now complete.

[7] MAINTENANCE

1. Self print of set values

Use SIM 22-6 to print the set values (machine settings) and jam history.
These values must be printed before execution of maintenance or disassembly procedures.

2. Maintenance System Table

The maintenance system table is the same as that of the AR-M350/M450.

A. Scanner / DSPF

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.) ○ Clean ▲ Replace △ Adjust ☆ Lubricate □ Move position

Unit name	Part name		When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
Optical section	Mirror/Lens/Reflector/Sensors		○	○	○	○	○	○	○	○	○	
	Table glass/OC		○	○	○	○	○	○	○	○	○	
	White reference glass		○	○	○	○	○	○	○	○	○	
	Rails			☆	☆	☆	☆	☆	☆	☆	☆	
	Drive belt/Drive wire/Pulley			×	×	×	×	×	×	×	×	
DSPF	Paper feed section	Take-up roller	○	○	▲	○	▲	○	▲	○	▲	Note 2
		Separation pad	○	○	▲	○	▲	○	▲	○	▲	Note 2
		Paper feed roller	○	○	▲	○	▲	○	▲	○	▲	Note 2
	Transport section	PS roller	○	○	○	○	○	○	○	○	○	
		Exposure section (Dust-proof glass)	○	○	○	○	○	○	○	○	○	
	Paper exit section	Paper feed roller SPF	○	○	○	○	○	○	○	○	○	
	Other	Sensors			○		○		○		○	For cleaning, blow air.
	Finish stamp section [Option] (Japan only)	Stamp solenoid									▲	
		Stamp individual part	×	×	×	×	×	×	×	×	×	User replacement at 10K or 1 year.

Note 2: Replacement reference: Same as above or 2 years.

B. Engine section

* For disassembly procedures, refer to the AR-P350/P450 Service Manual.

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.)

○ Clean

▲ Replace

△ Adjust

☆ Lubricate

□ Move position

Unit name	Part name	When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
Drum peripheral	Drum		▲	▲	▲	▲	▲	▲	▲	▲	Installed when shipping
	Cleaner blade		▲	▲	▲	▲	▲	▲	▲	▲	
	Toner reception seal		▲	▲	▲	▲	▲	▲	▲	▲	
	Side molt		▲	▲	▲	▲	▲	▲	▲	▲	
	Transfer roller	×	×	▲	×	▲	×	▲	×	▲	
	Discharge plate	×	×	▲	×	▲	×	▲	×	▲	
	TR bearing (F/R)			×		×		×		▲	
	Transfer roller collar			×		×		×		▲	
	After-transfer star ring			×		×		×		×	
	TR gear	×	×	×	×	▲	×	×	×	▲	
	Screen grid	(○)×	▲	▲	▲	▲	▲	▲	▲	▲	
	Drum separation pawl UN		▲	▲	▲	▲	▲	▲	▲	▲	
	Charger case (M/C)		○	○	○	○	○	○	○	○	
	Charging plate (saw teeth)	(○)×	▲	▲	▲	▲	▲	▲	▲	▲	
Developing section	Developer		×	▲	×	▲	×	▲	×	▲	Supplied when installing
	DV blade		×	▲	×	▲	×	▲	×	▲	
	DSD collar		○	○	○	○	○	○	○	○	
	DV side seal F		×	▲	×	▲	×	▲	×	▲	
	DV side seal R		×	▲	×	▲	×	▲	×	▲	
	Toner cartridge										Attached when installing./ EX Japan: 814g, user replacement for every 27K.
Fusing section	Upper heat roller		○	○	○	▲	○	○	○	▲	
	Lower heat roller		○	○	○	▲	○	○	○	▲	
	Upper separation pawl		▲	▲	▲	▲	▲	▲	▲	▲	
	Lower separation pawl		▲	▲	▲	▲	▲	▲	▲	▲	
	Thermistor		○	×	○	×	○	×	○	×	Clean and remove paper dust.
	Upper heat roller gear		×	×	×	▲	×	×	×	▲	
	Paper guides	○	○	○	○	○	○	○	○	○	
	Gears		☆	☆	☆	☆	☆	☆	☆	☆	
	Cleaning roller		×	×	×	▲	×	×	×	▲	
	CL roller collar					▲				▲	
Filters	Ozone filter			▲		▲		▲		▲	
Paper feed section	Paper feed roller	○	○	×	○	×	○	×	○	×	Note 1
	Torque limiter	×		×		×		×		×	Note 1
Transport section	PS follower roller	○	○	○	○	○	○	○	○	○	
Paper exit reverse section	Transport rollers	○	○	○	○	○	○	○	○	○	
	Transport paper guides	○	○	○	○	○	○	○	○	○	
	Paper dust remover		×	▲	×	▲	×	▲	×	▲	
Drive section	Specified position	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Belts							×			
Image quality		×	×	×	×	×	×	×	×	×	
Other	Sensors			×		×		×		×	

Note 1: Replacement reference: Use the counter value of each paper feed port as the replacement reference.

Paper feed roller/Torque limiter section: 80K or 2 years

C. Peripheral devices

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.)

○ Clean

▲ Replace

△ Adjust

☆ Lubricate

□ Move position

Option name	Part name		When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
ADU + Manual feed	Paper feed separation section	Paper feed rollers	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Separation pad	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Torque limiter	(○) ×		×		×		×		×	Note 3
	Transport section	Transport rollers	○	○	○	○	○	○	○	○	○	
		Transport paper guides	○	○	○	○	○	○	○	○	○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
Desk (Multi stage LCC) Multi purpose	Paper feed separation section	Paper feed rollers	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Torque limiter	(○) ×		×		×		×		×	Note 3
	Transport section	Transport roller	○	○	○	○	○	○	○	○	○	
		Transport paper guides	○	○	○	○	○	○	○	○	○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
Finisher	Transport section	Transport rollers	○		○		○		○		○	
		De-curler roller	(○) ×	×	○	×	○	×	○	×	○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
	Staple un											Replace UN at 100K staple.
	Staple cartridge											User replacement for every 3000pcs.
Mail-bin stacker	Transport section	Transport roller	○		○		○		○		○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
Saddle finisher	Transport section	Transport roller	○		○		○		○		○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
	Staple UN											Replace UN at 100K staple (including the staple UN and the holder section).
	Staple cartridge											User replacement for every 5000 pcs.

Note 3: Replacement reference: Use the counter value of each paper feed port as the replacement reference.

Paper feed roller/Separation pad/Torque limiter section: 80K or 2 years

[8] SIMULATION

For the simulation, the following items have been changed.

22-10

Purpose	Adjustment, setup, operation data output, check (display)
Function (Content)	Used to check the system configuration (option, internal hardware).
Section	
Item	Spec
Operation/Procedure	The machine composition below is displayed.

```

SIMULATION 22-10
SYSTEM INFORMATION.
MACHINE: *****
SPF: ***** XXXXXXXXXXXX
FINISHER : ***** MAIL BIN : ***** PUNCH : *****
DESK/LCC : ***** ADU: ***** XXXXXXXXXXXX
PROCESS TYPE : *
SYSTEM MEMORY: **MB      HDD: **MB  ICU F *****
NIC : ***** NSCN : ***** PS3 : *****
FAX: ***** FAX MEMORY : **MB  HAND SET: *****
STAMP : *****

```

<List of display value>

MACHINE	Model codes
SPF	NONE/ (Model code)
FINISHER	NONE/ (Model code)
MAIL BIN	NONE/ (Model code)
PUNCH	NONE/ (Model code)
DESK/LCC	NONE/ (Model code)
ADU	NONE/ (Model code)
PROCESS TYPE	Process control spec (1, 2: AR machine 3: DM machine)
SYSTEM MEMORY	Memory capacity (MB)
HDD	Hard disk capacity (MB)
ICU	PRINTER/MFP
NIC	NONE/ (Model code)
NSCN	NONE/ (Network scanner)
PS3	NONE/ (PS3 expansion kit)
FAX	NONE/ (Model code)
FAX MEMORY	FAX expansion memory capacity (MB)
HAND SET	NONE/ (Model code)
STAMP	Finisher stamp NONE/ (Model code)

<List of machine model codes>

Item	Display	Content
MACHINE	AR-P350/350LP	
	AR-P450/450LP	
	AR-M350/350M	(Include the N model)
	AR-M450/450M	(Include the N model)
	AR-310M	
	AR-M350U	
	AR-M450U	
	AR-310S/310F	
	AR-350S/350F	
	AR-450S/450F	
SPF	-	Document feed unit not installed
	AR-EF2	Document feed unit (SPF) installed
	AR-EF1	Duplex document feed unit installed
FINISHER	-	After-work unit not installed
	AR-FN6	Built-in finisher installed
	AR-FN7	Console finisher installed
MAIL BIN	-	Mail bin not installed
	AR-MS1	Mail bin installed
Punch unit	-	Punch unit not installed
	AR-PN1A	Punch unit 2 holes
	AR-PN1B	Punch unit 3 holes
	AR-PN1C	Punch unit 4 holes
	AR-PN1D	Punch unit 4 holes wide hole
ADU	-	Duplex module not installed
	AR-DU3	Duplex module installed
	AR-DU4	Duplex module + manual feed unit installed
DESK	-	Paper feed desk not installed
	AR-MU1	Multi-purpose tray installed
	AR-D14/D15	Paper feed desk installed
	AR-D13	Tandem desk installed
ICU	PRINTER	Printer board
	AR-M11	MFP board
	AR-M12 *	MFP board (U model)
	AR-M13 *	MFP board (S model)
MEMORY	0MB	No expansion memory
	***MB	Expansion memory ***MB
HD	0MB	Hard disk not installed
	****MB	Hard disk installed (AR-HD3)
NIC	-	NIC not installed
	AR-NC5J	NIC installed
PS3 expansion kit	-	PS3 expansion kit not installed
	AR-PK1	PS3 expansion kit installed
FAX	-	FAX expansion kit installed
	AR-FX5	FAX expansion kit not installed
Network scanner	-	Network expansion kit not installed
	AR-NS2F	Network expansion kit installed
Expansion memory	-	Expansion memory for FAX not installed
	AR-MM9	Expansion memory for FAX 8MB (AR-MM9) installed
Handset	-	handset not installed
	AR-HN5	Handset installed
Finish stamp	-	Finish stamp unit not installed
	AR-SU1	Finish stamp unit installed

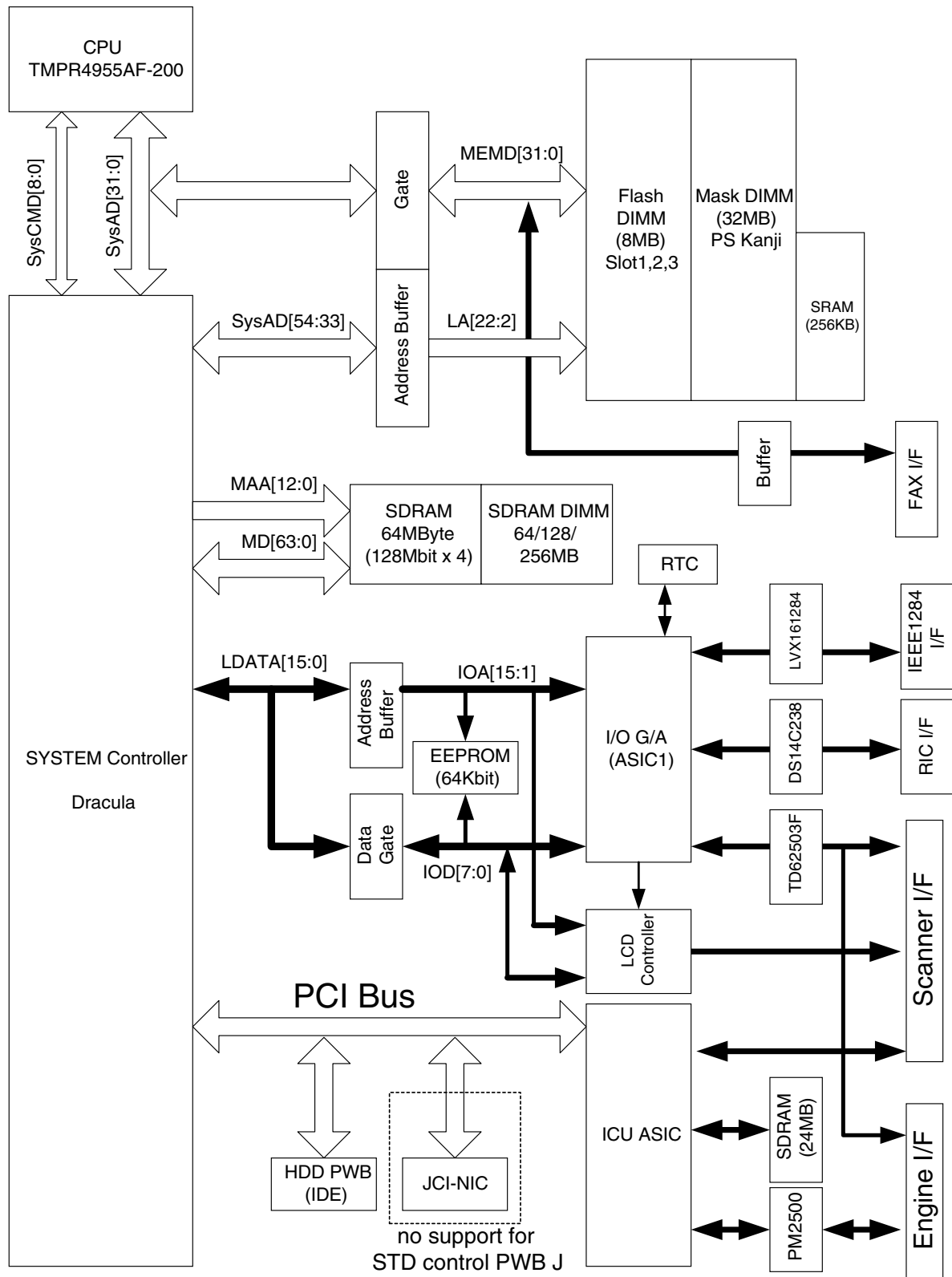
*: Not registered as a product.

[9] CIRCUIT DIAGRAM

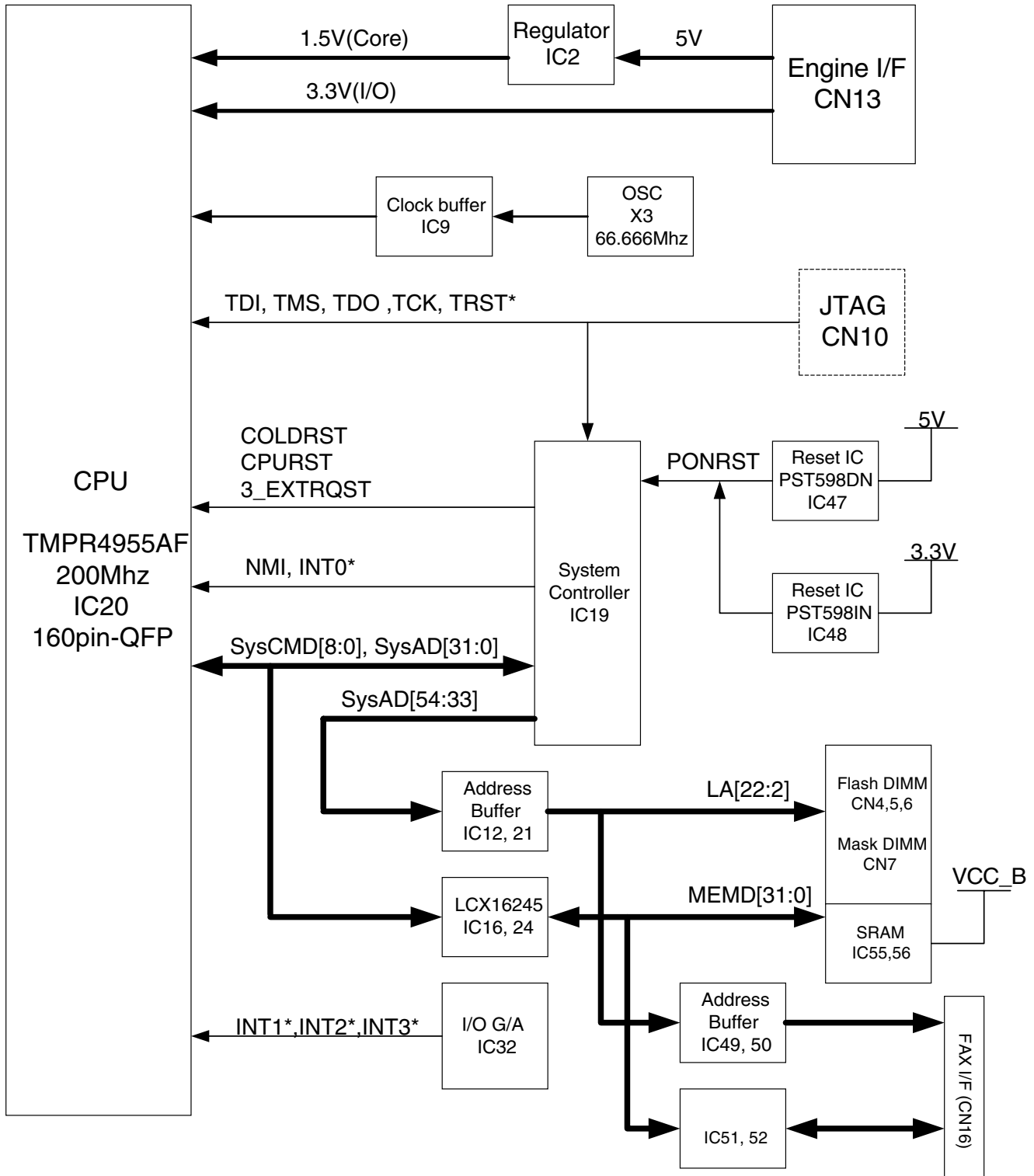
1. MFP Control PWB(for AR-M350U/M450U)

A.Block Diagrams

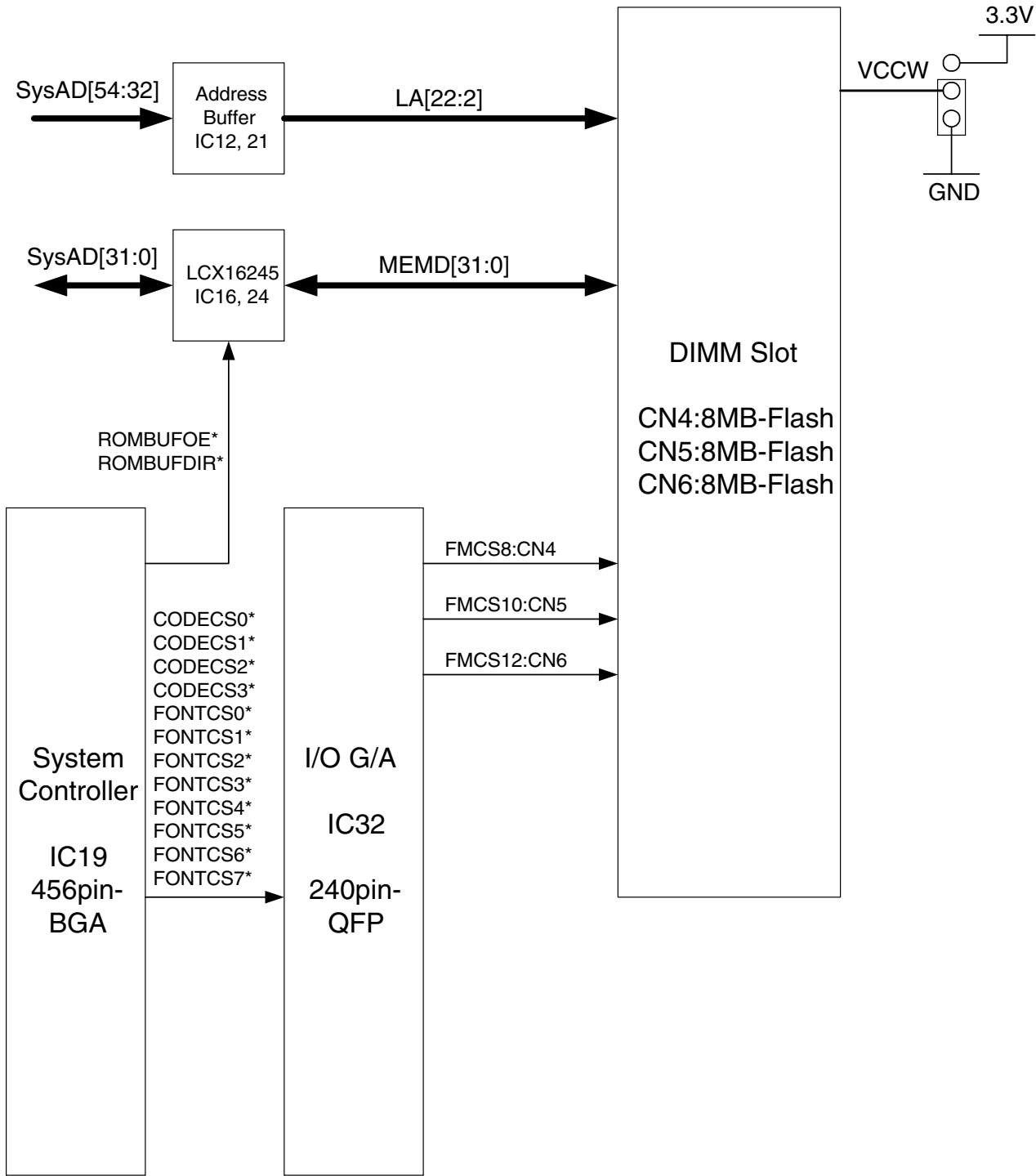
General



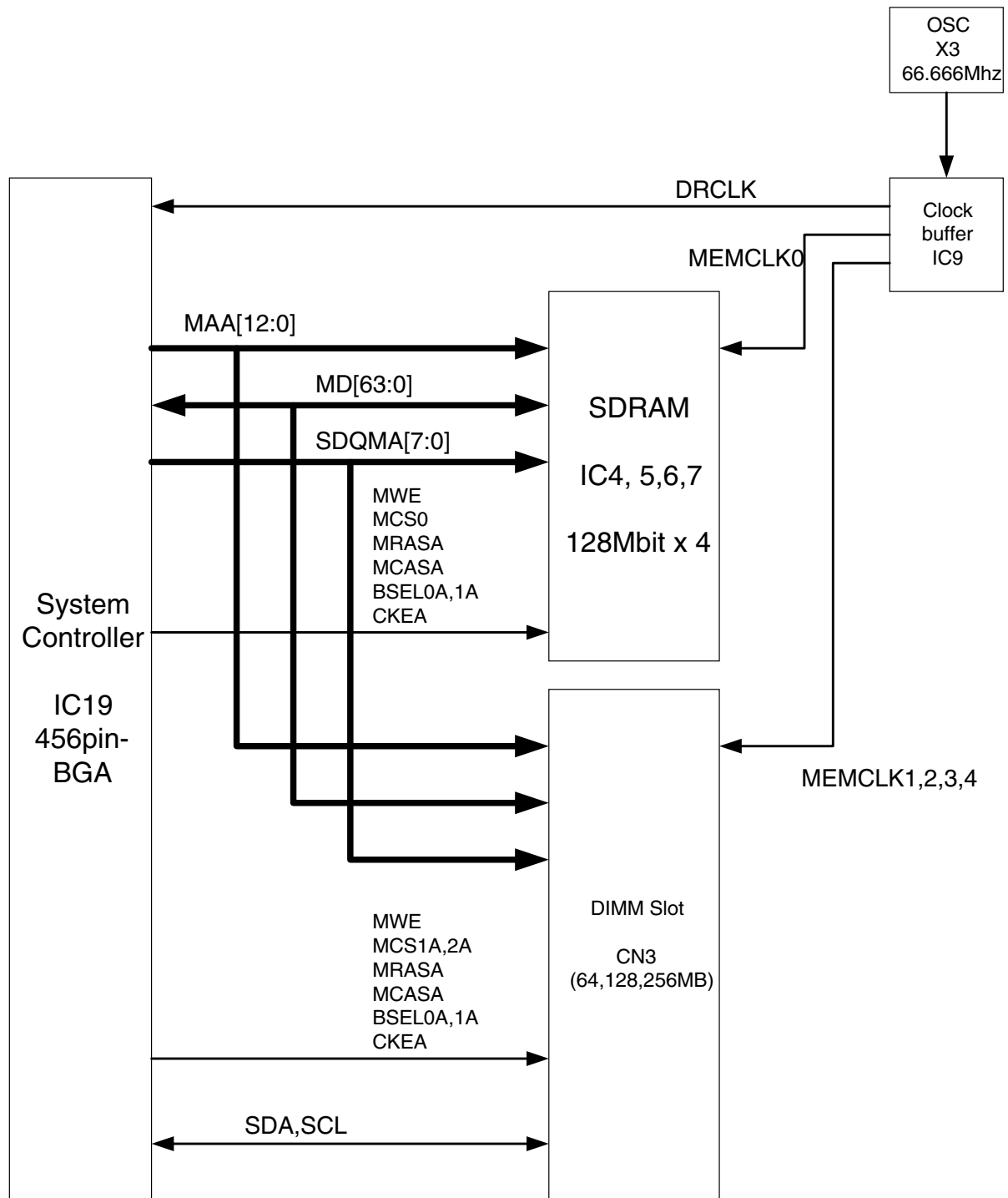
CPU Block



ROM Block (Flash & Mask)

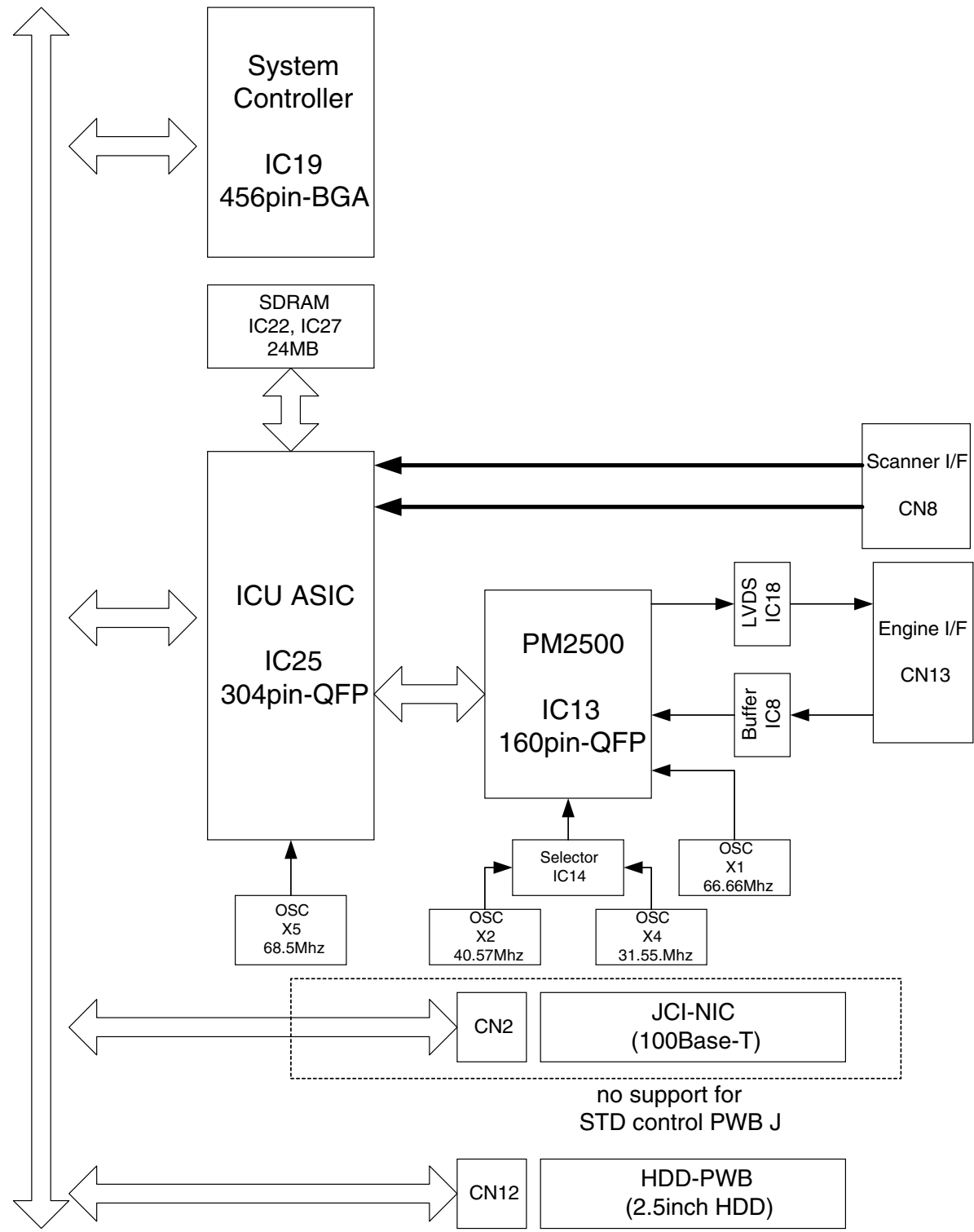


SDRAM Block (Standard & Option)

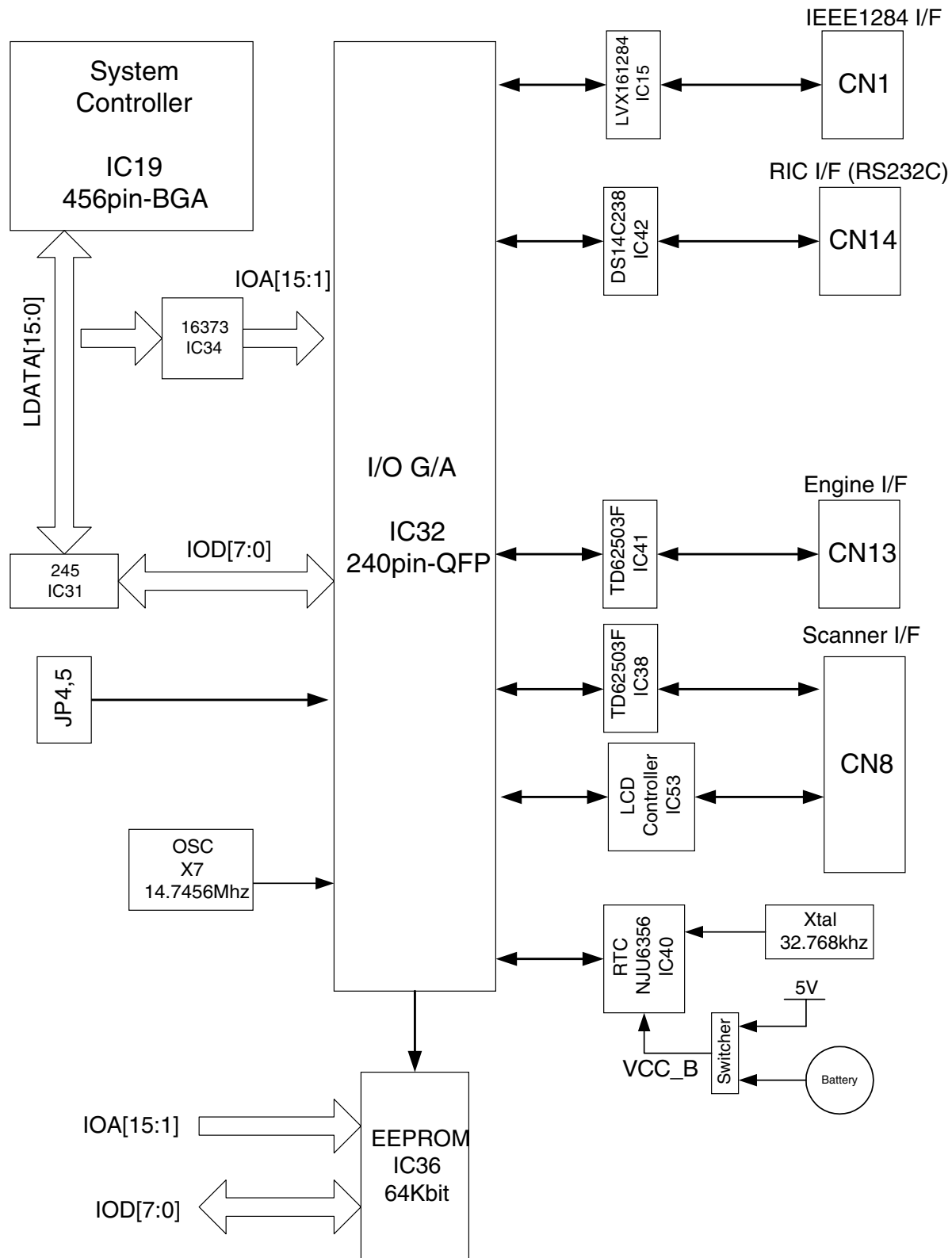


PCI Block (ICU & Option)

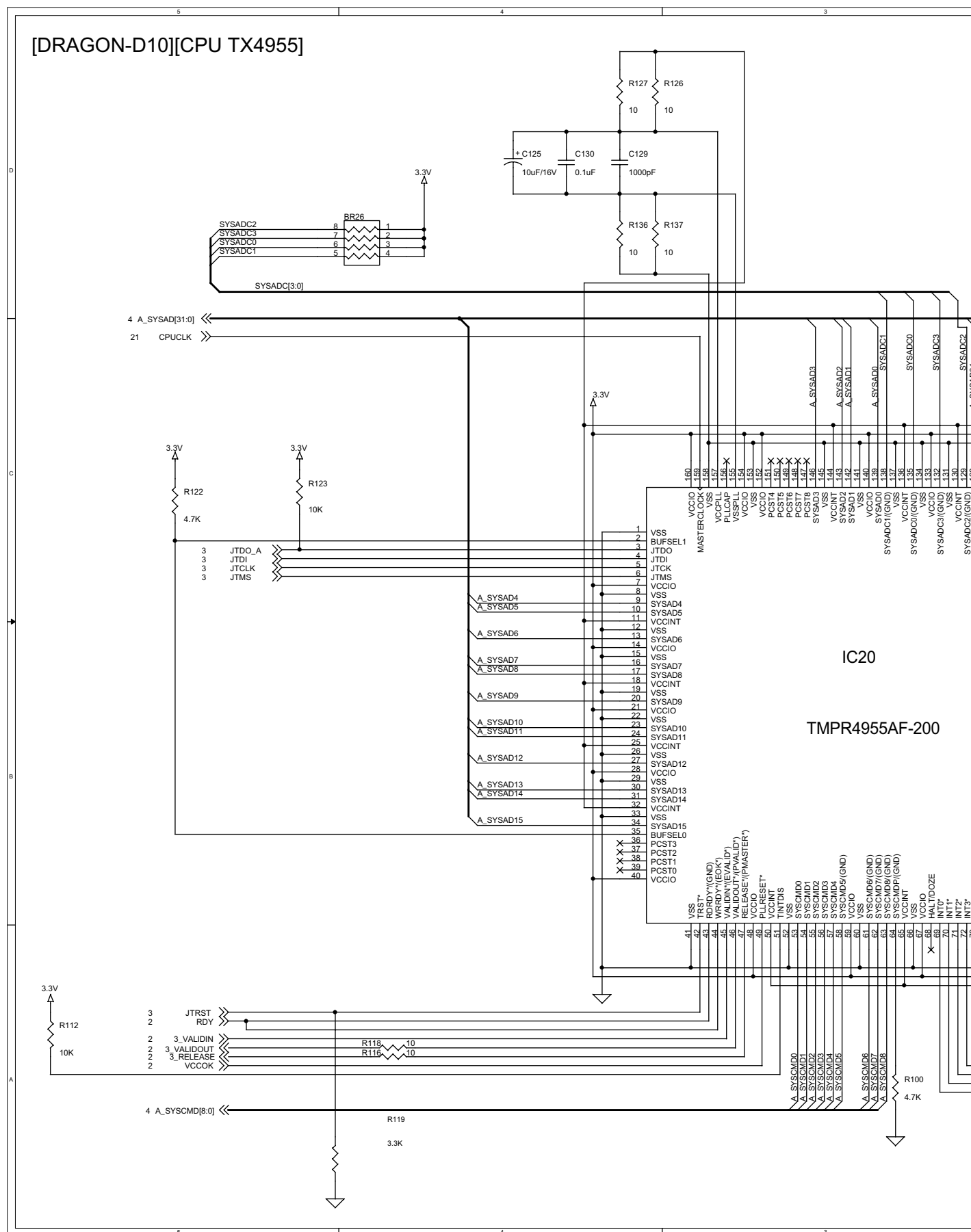
PCI-Bus

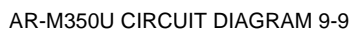


I/O Block (EEPROM & Misc I/O)

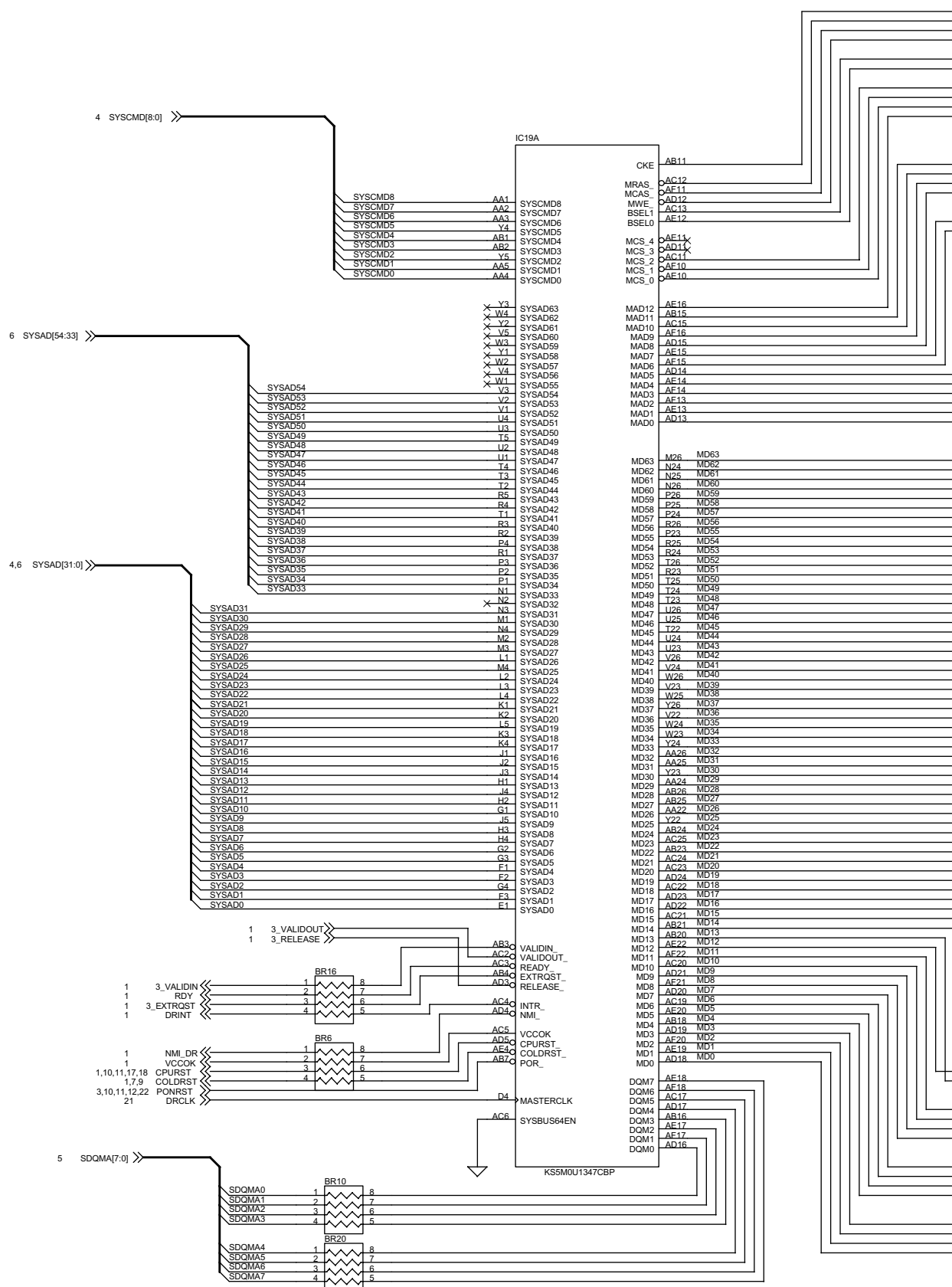


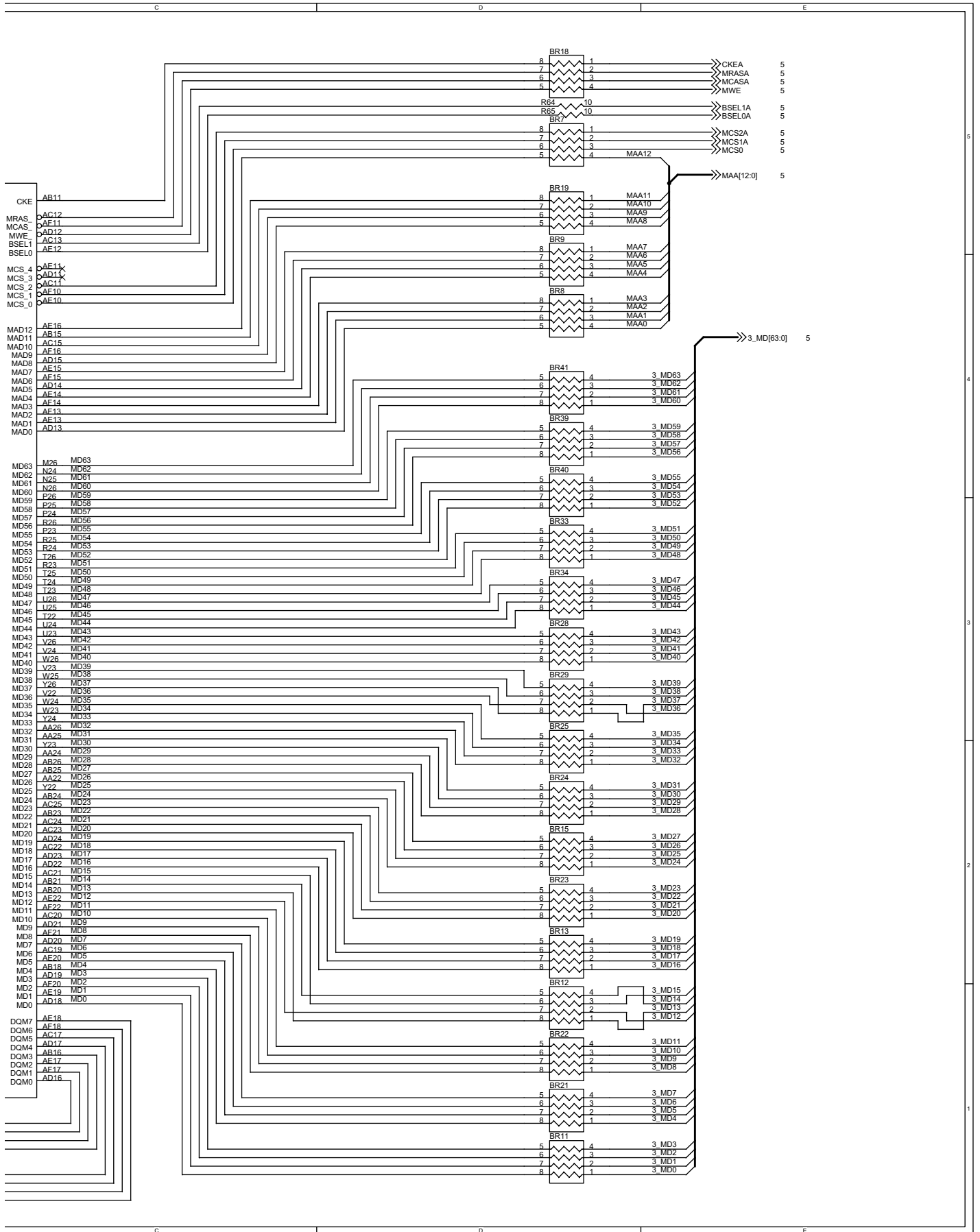
B. Circuit Diagram



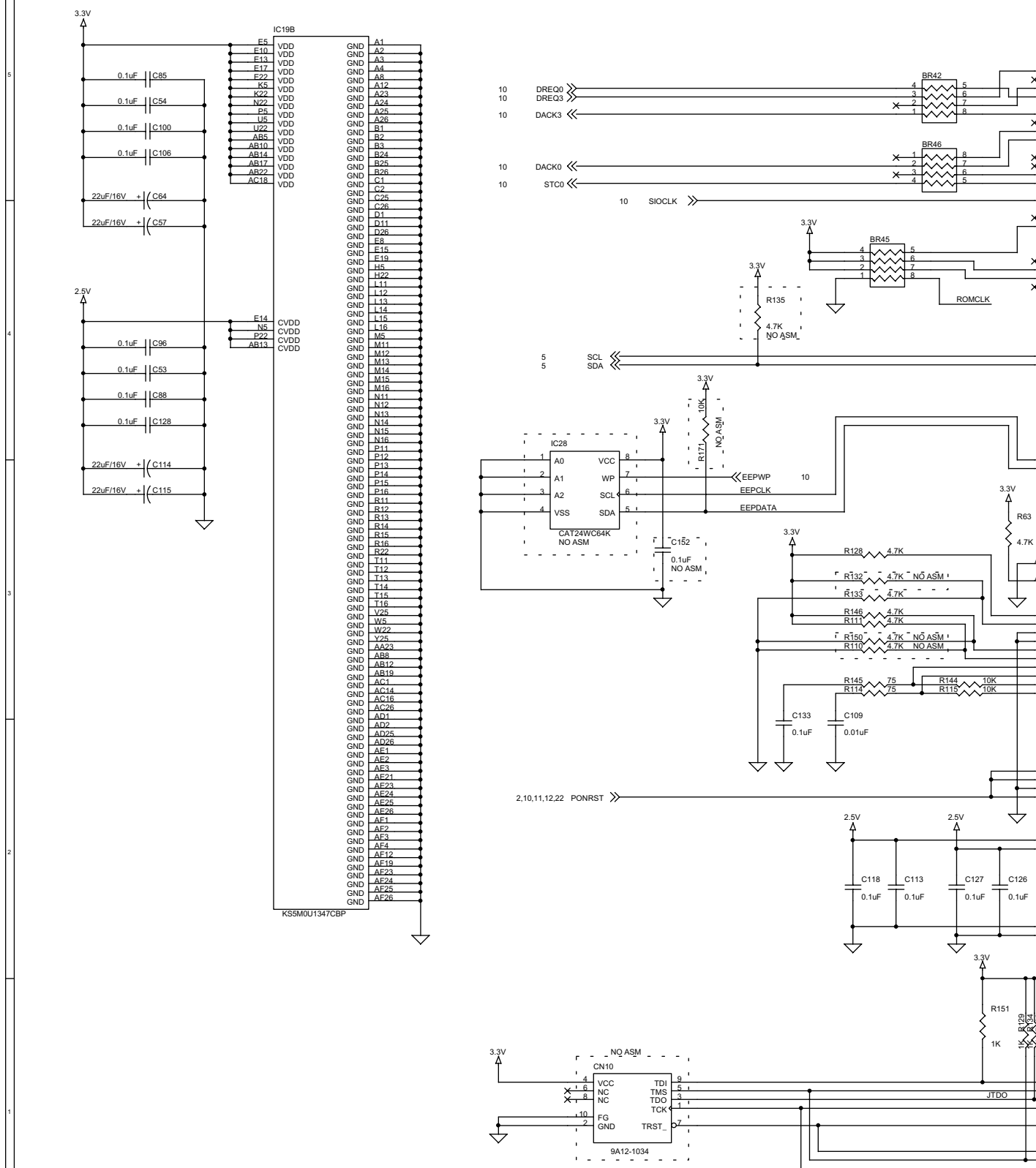


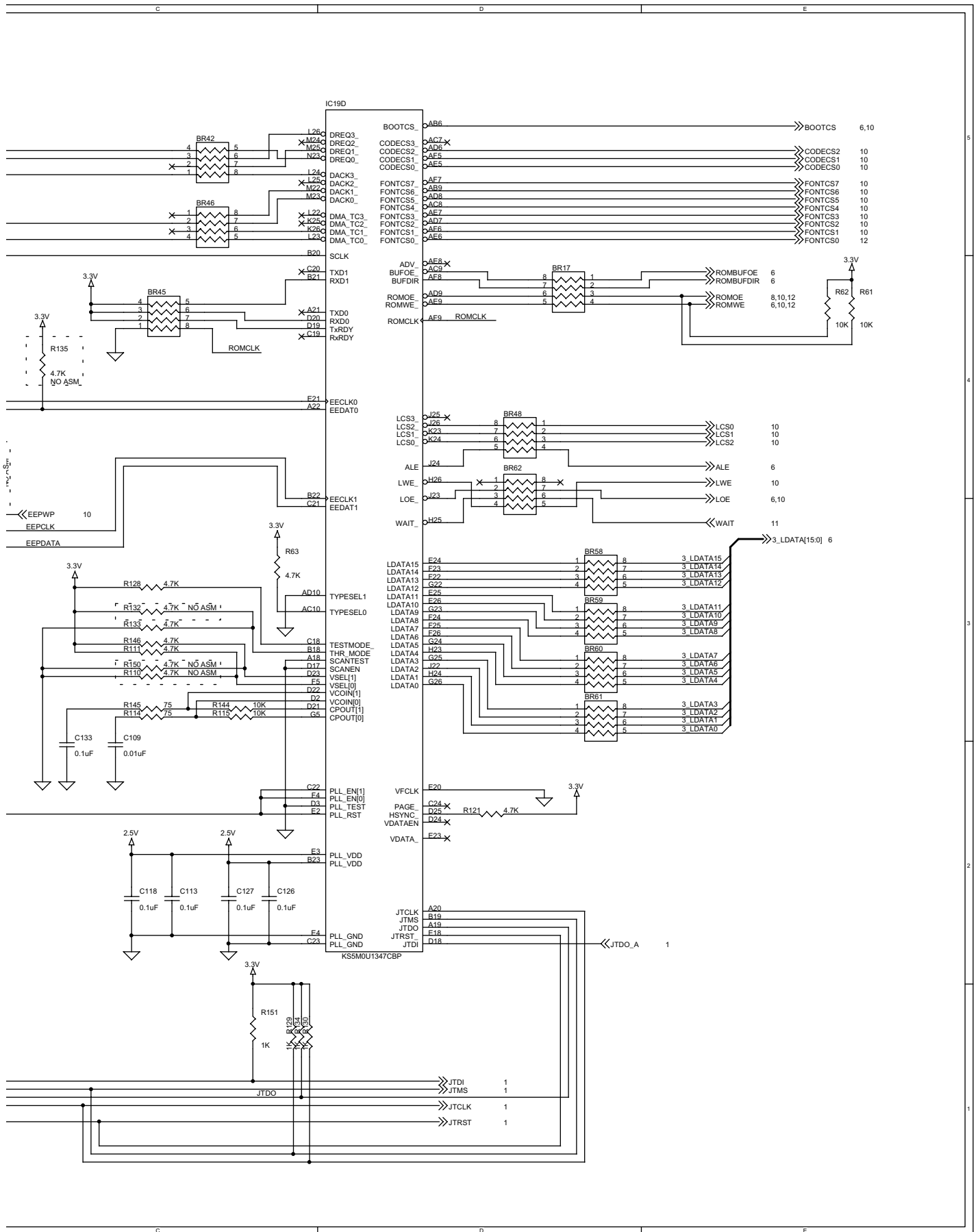
[Print Controller (for AR-M350U / M450U) (1/3)]





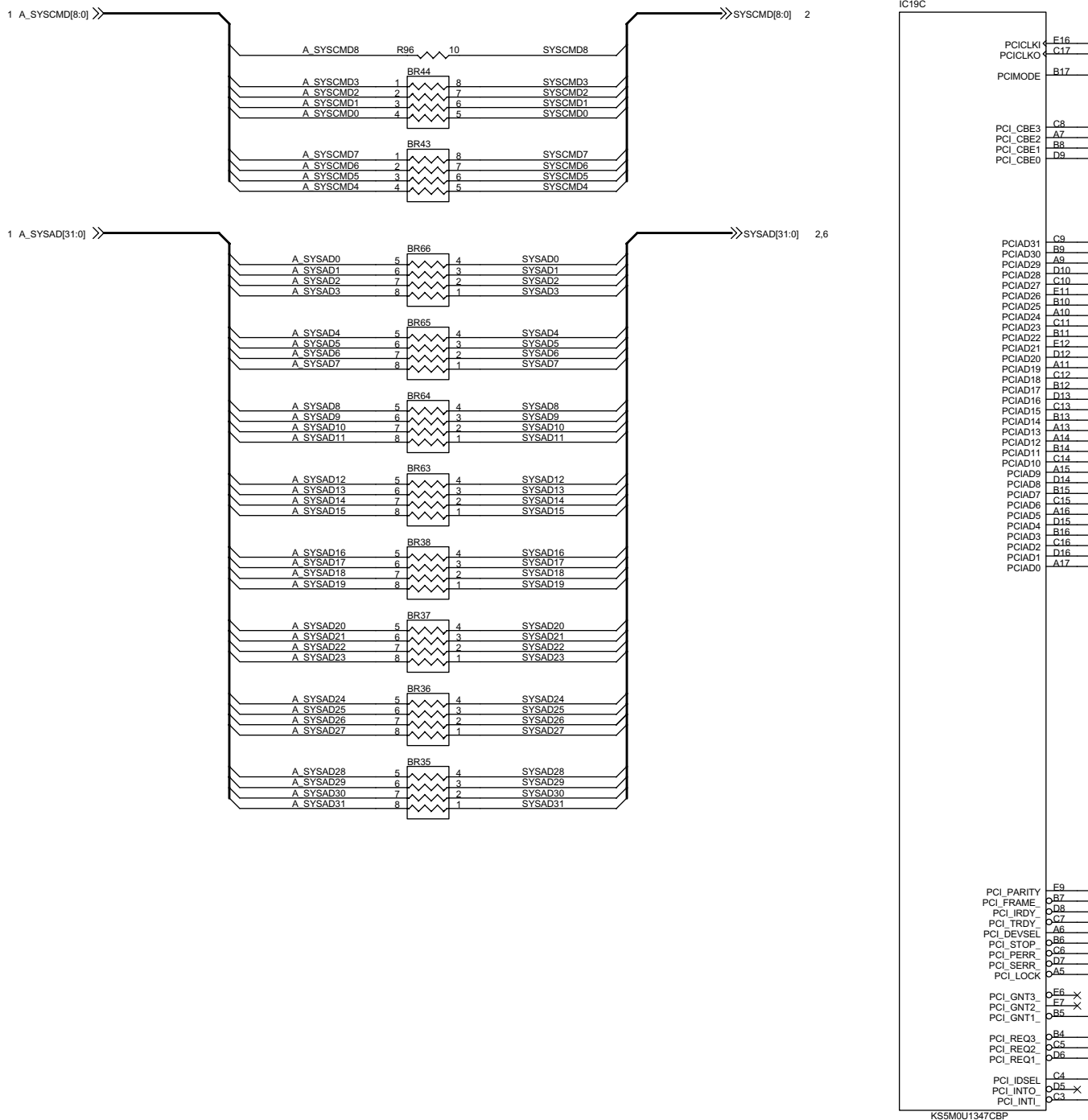
[Print Controller (for AR-M350U / M450U) (2/3)]



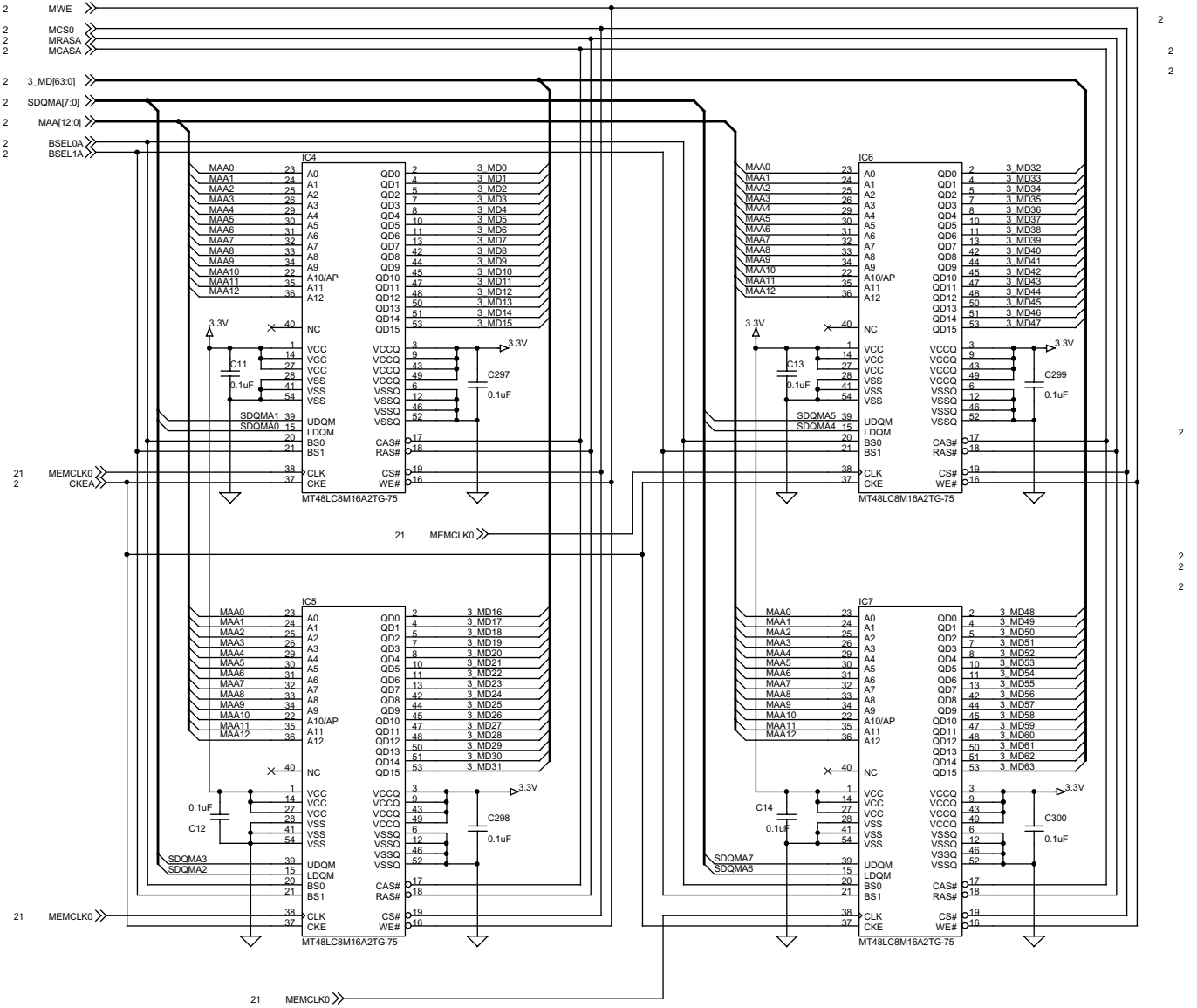


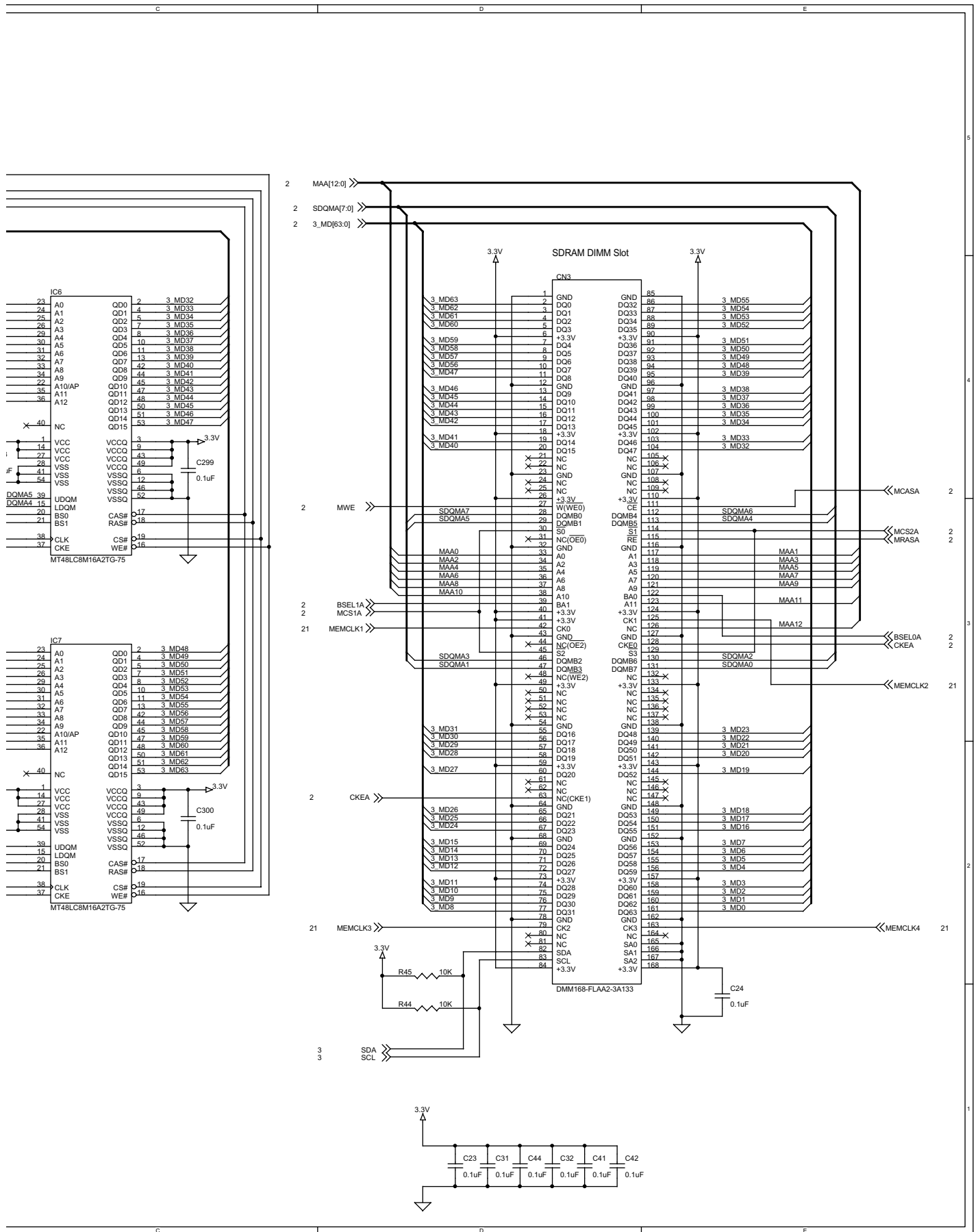
AR-M350U CIRCUIT DIAGRAM 9-13

[Print Controller (for AR-M350U / M450U) (3/3)]

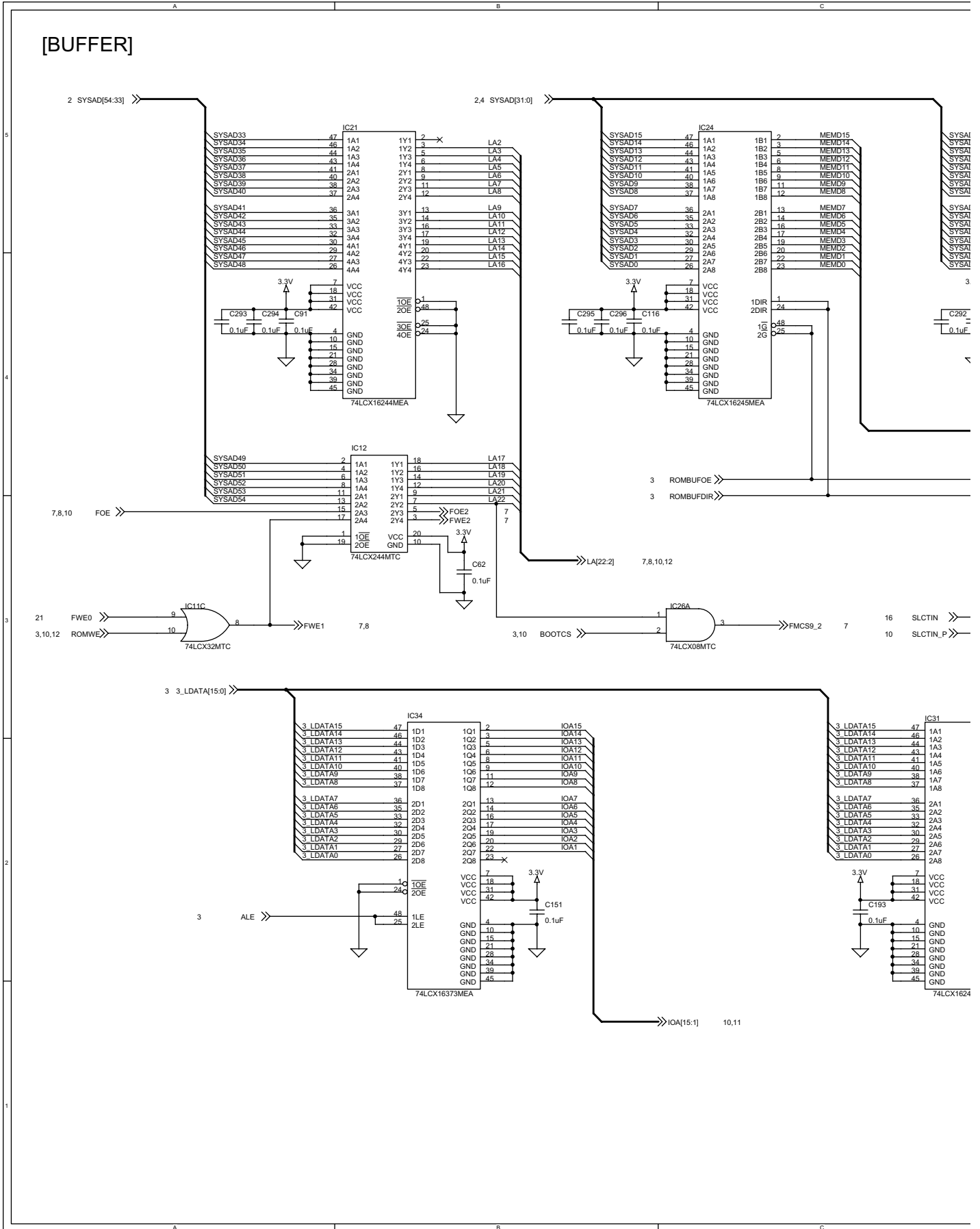


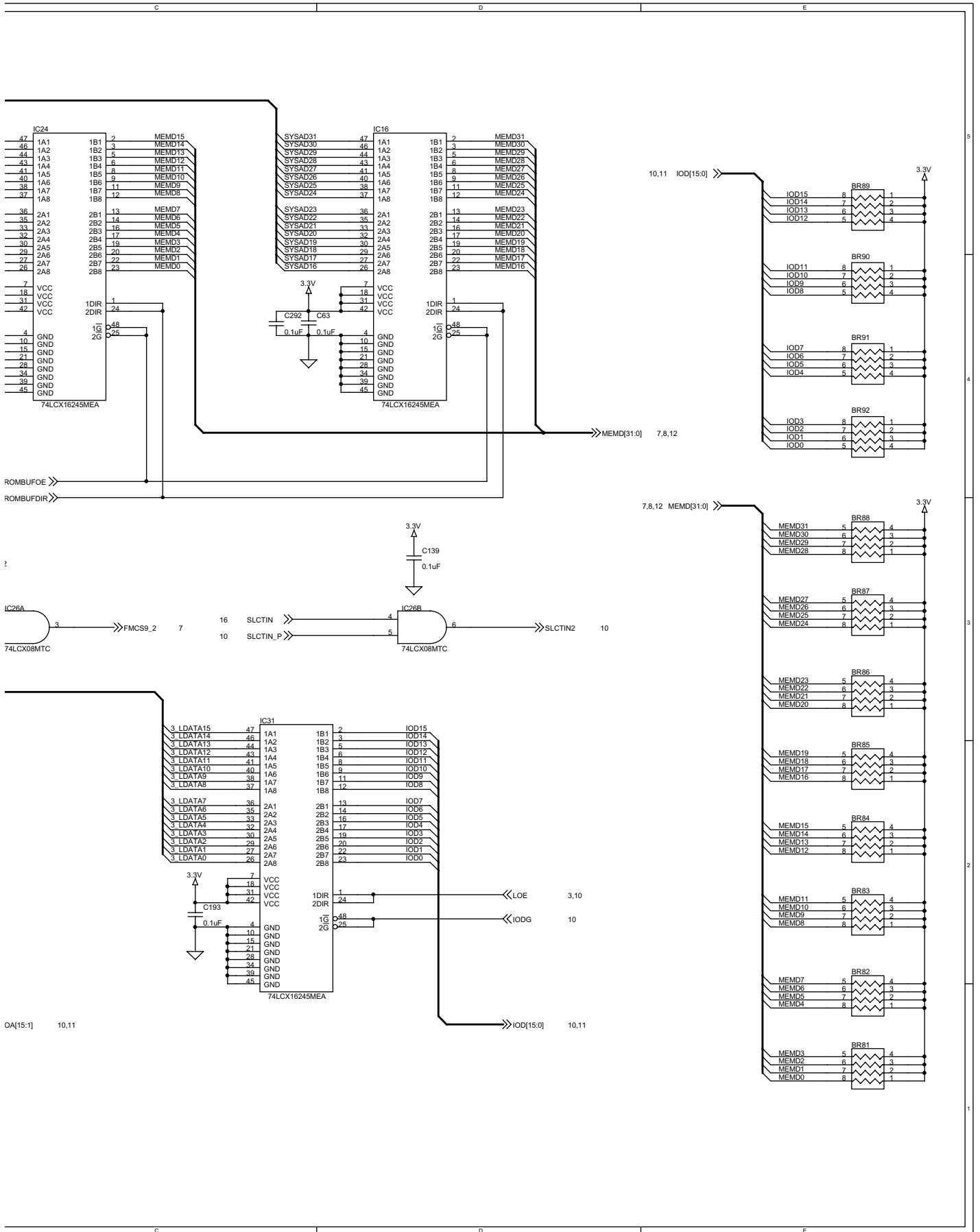
[SDRAM]





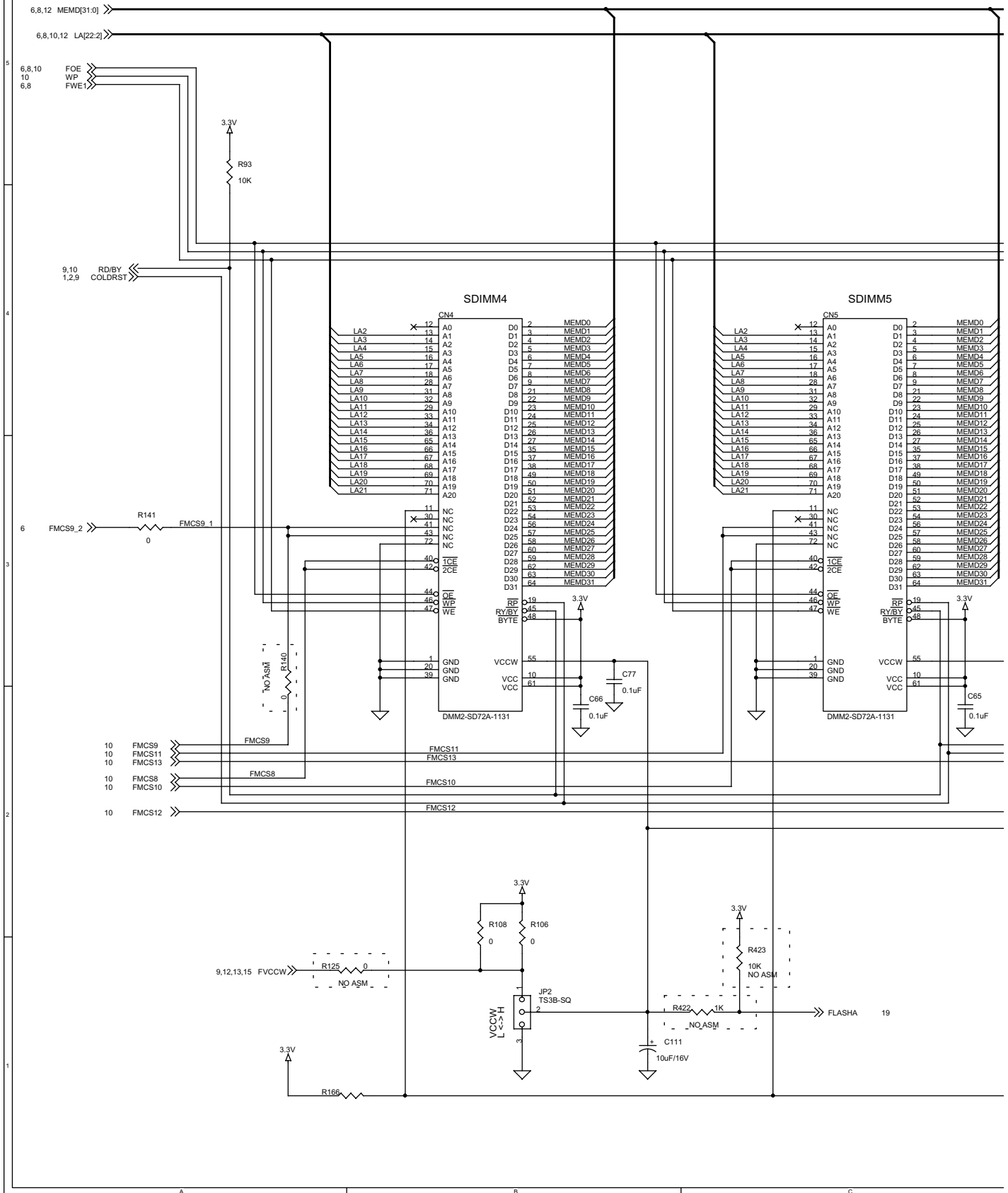
[BUFFER]

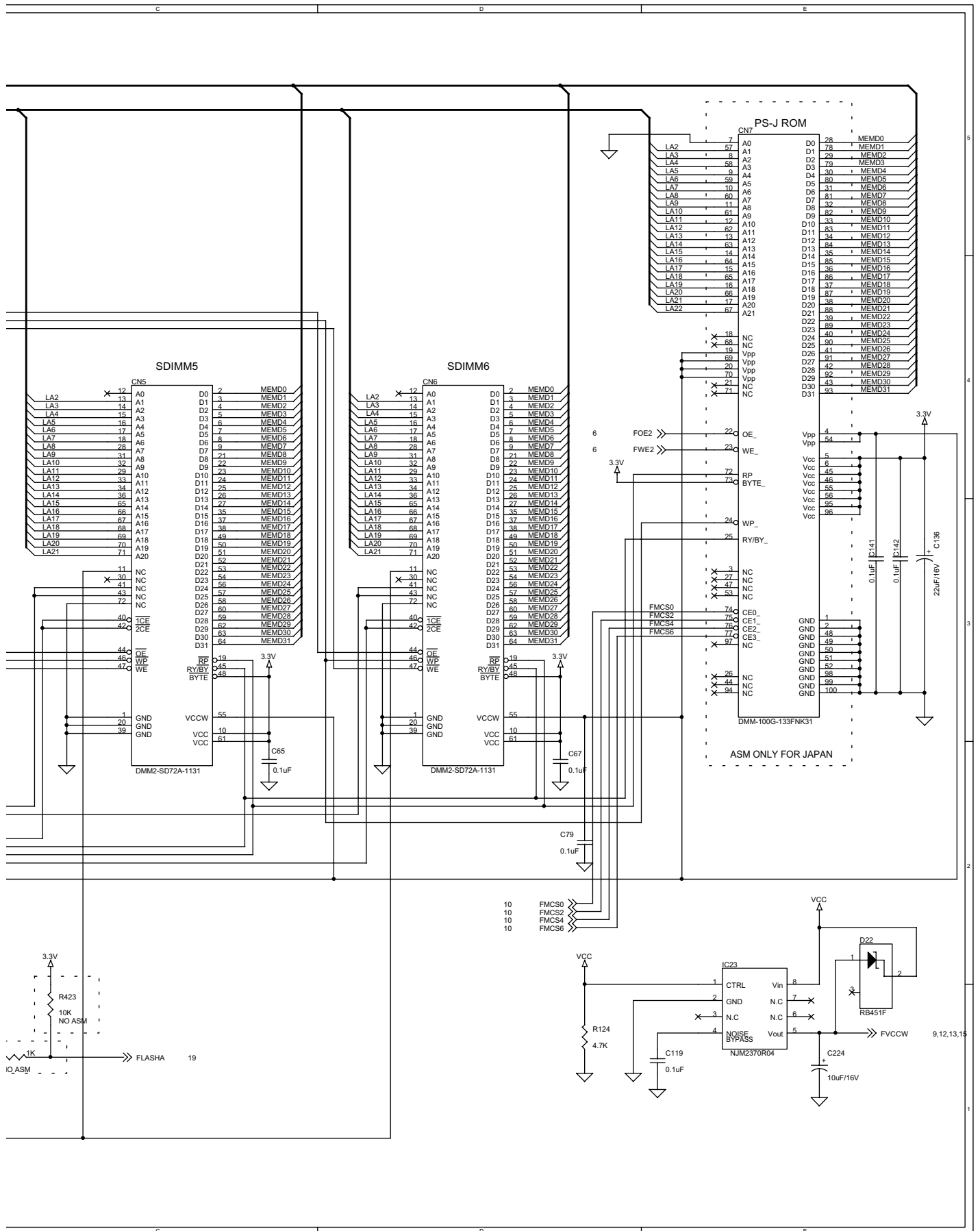




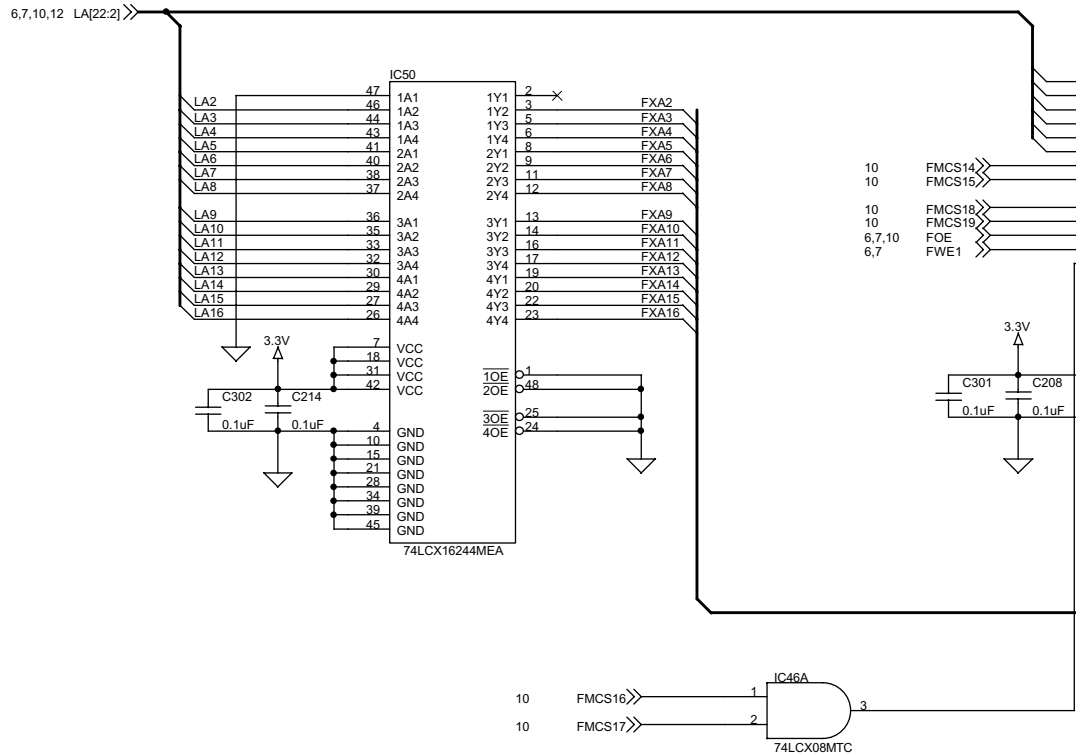
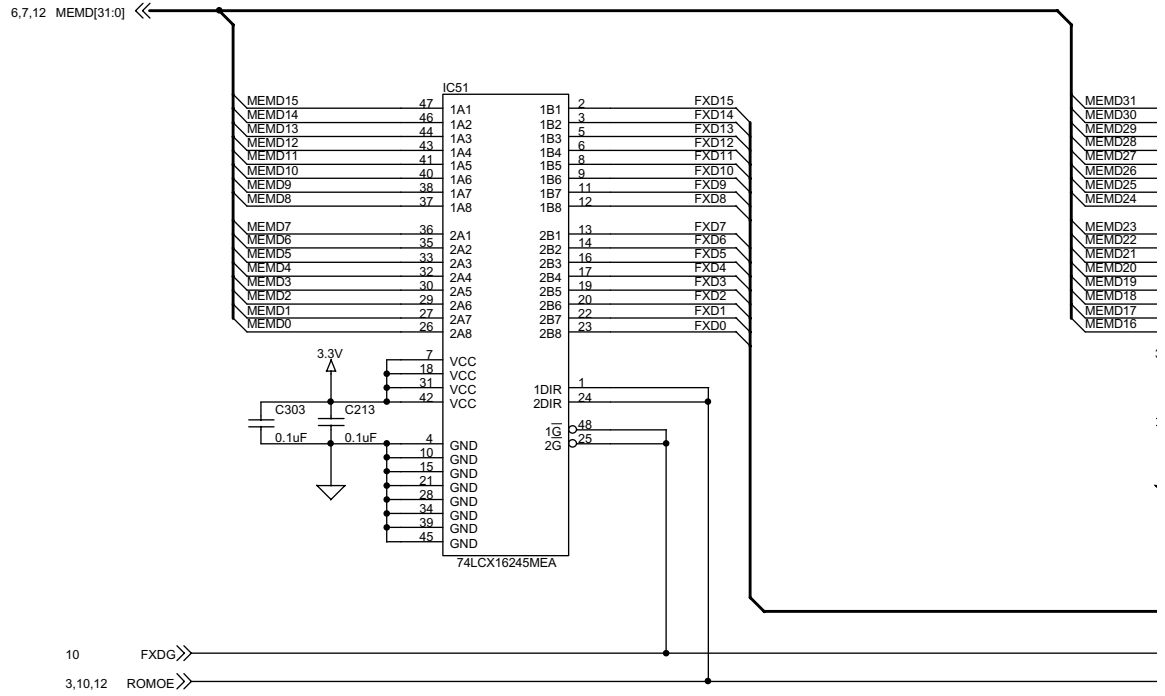
AR-M350U CIRCUIT DIAGRAM 9-19

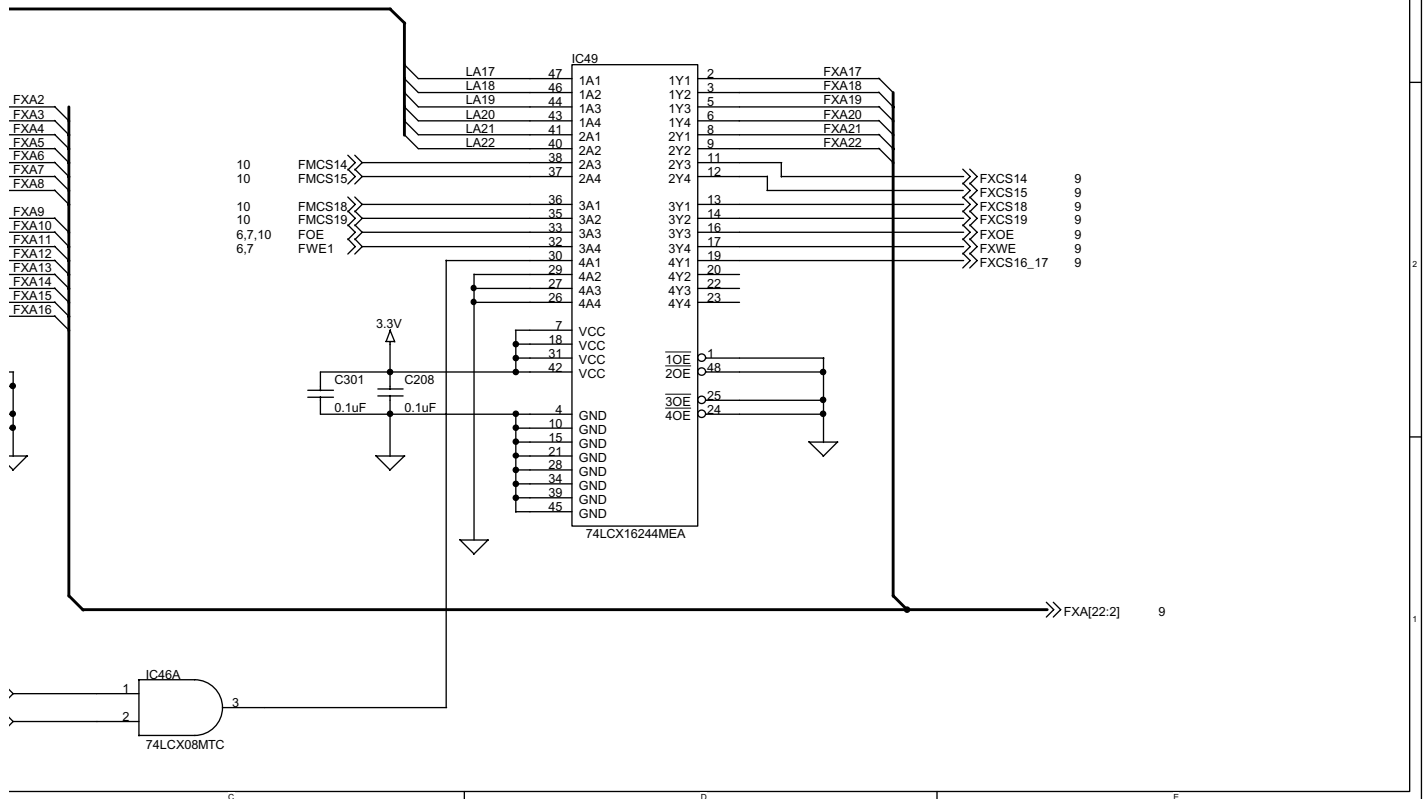
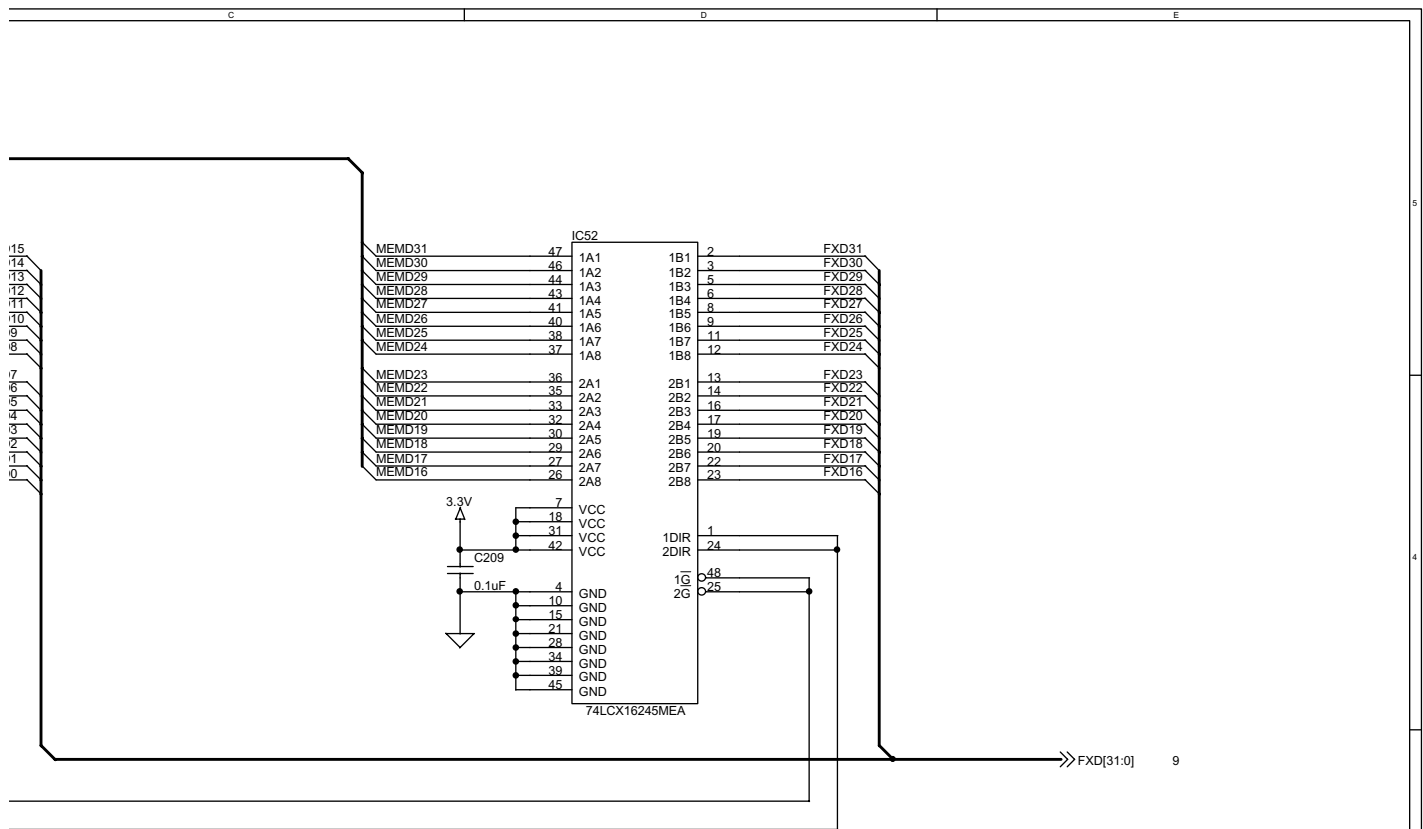
[FLASH SDIMM]



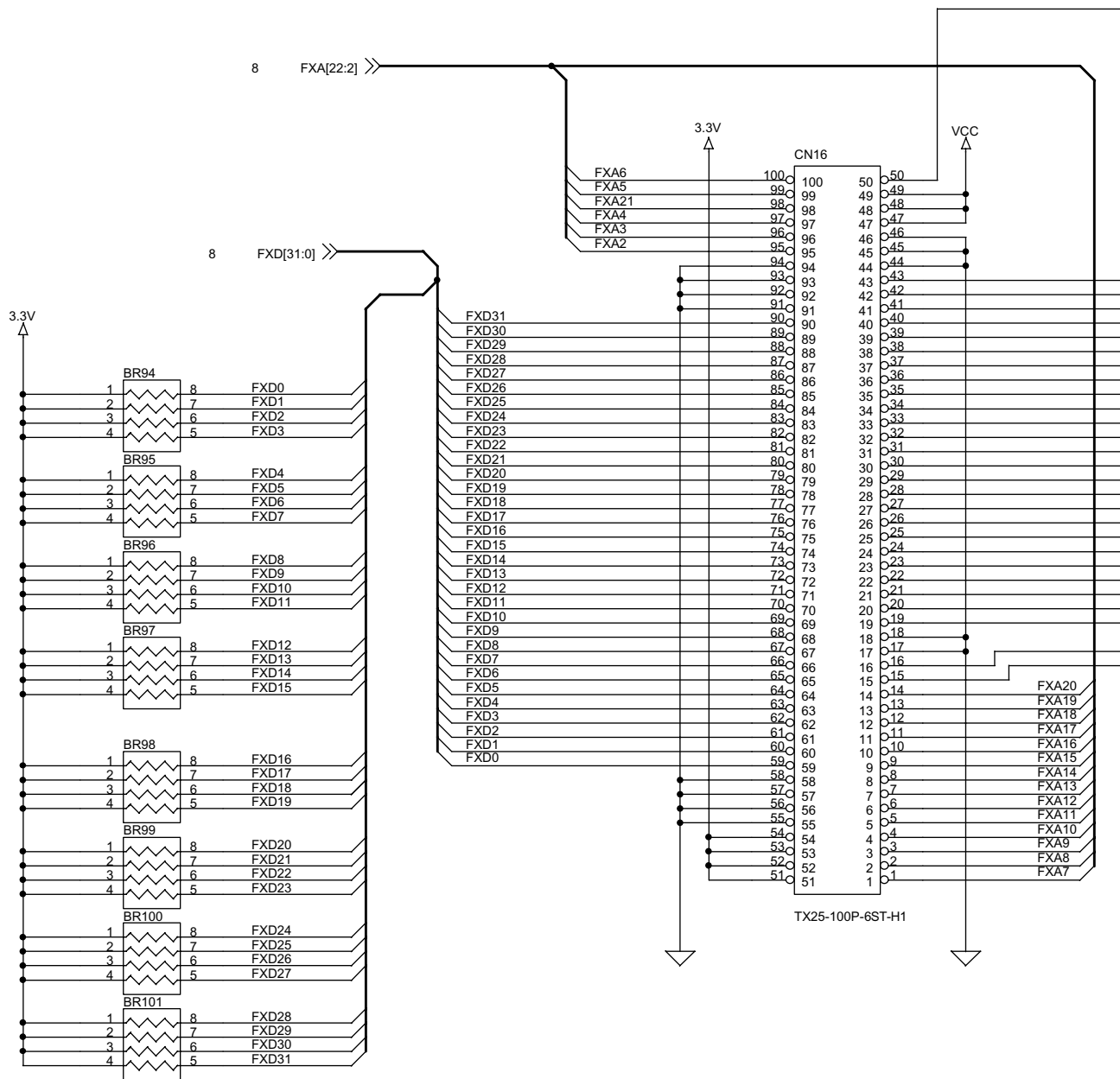


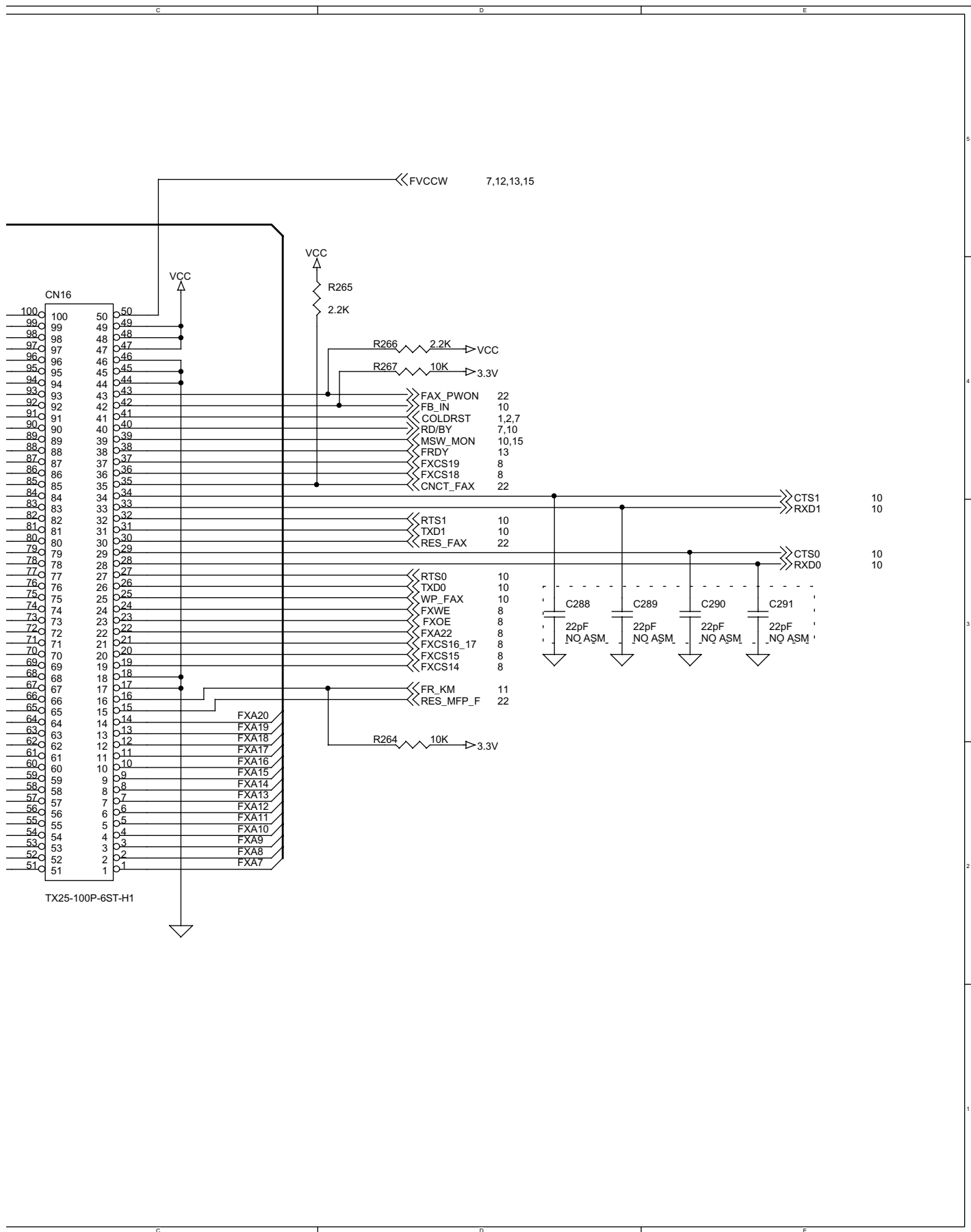
[FAX I/F BUF]

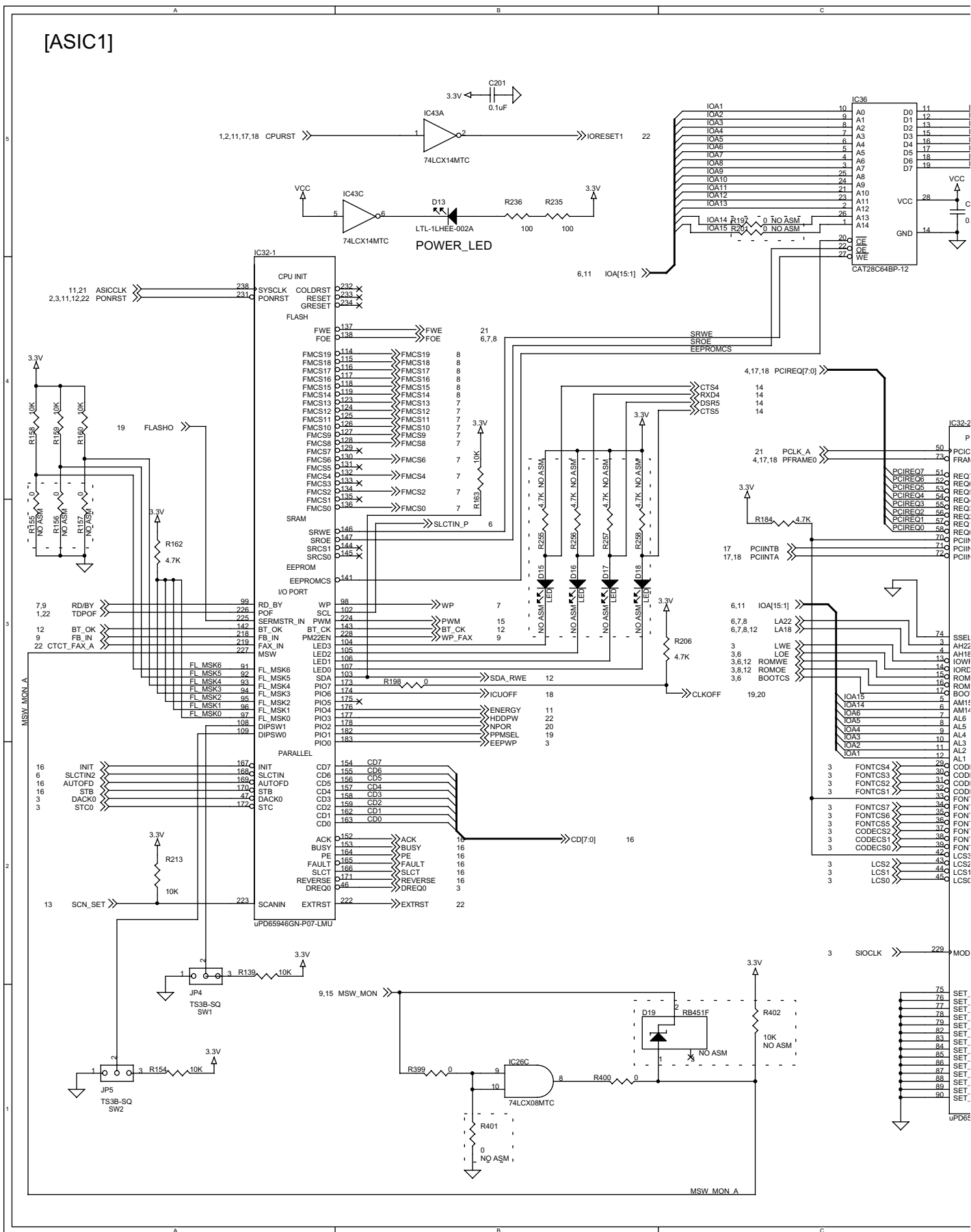


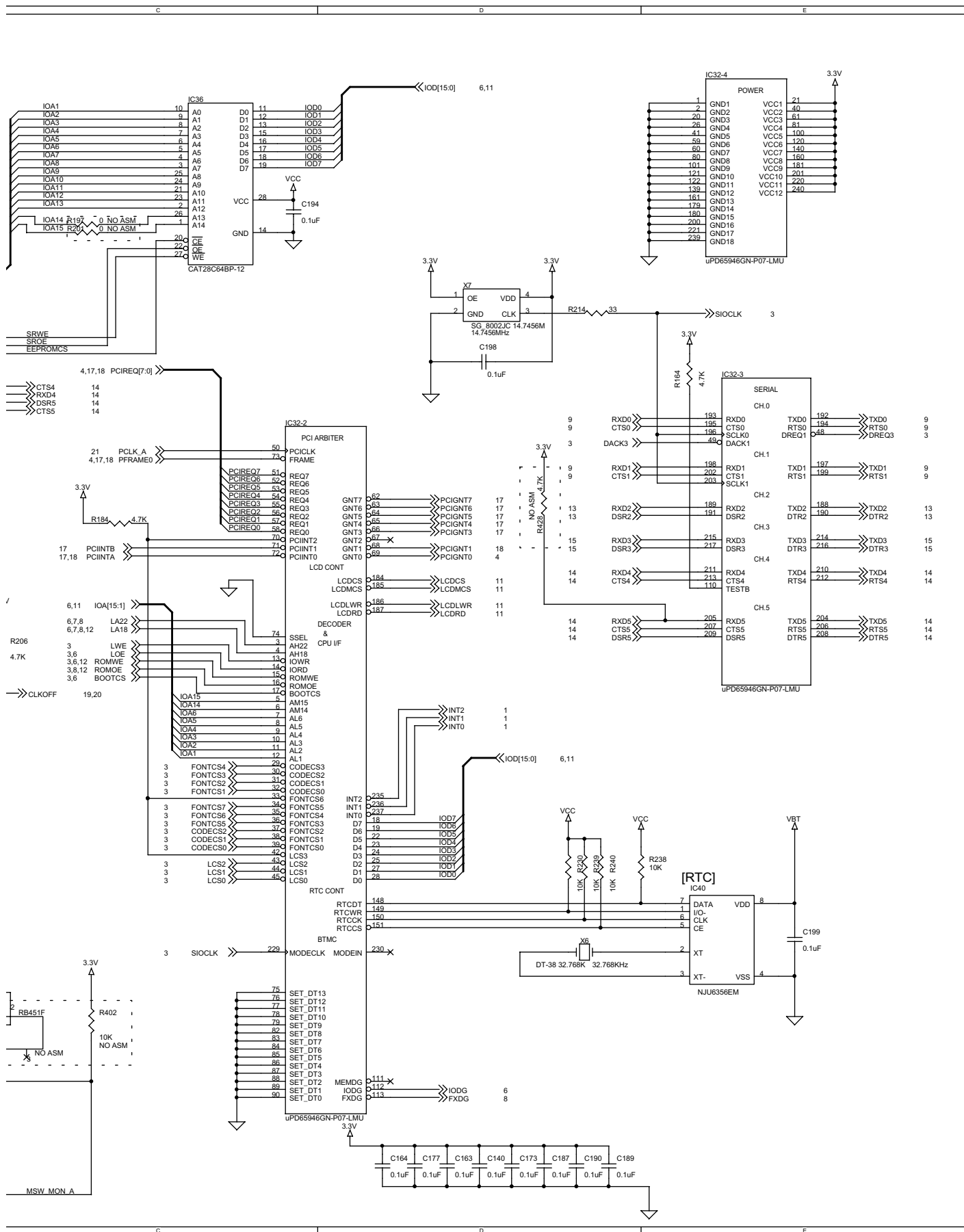


[FAX I/F CN]



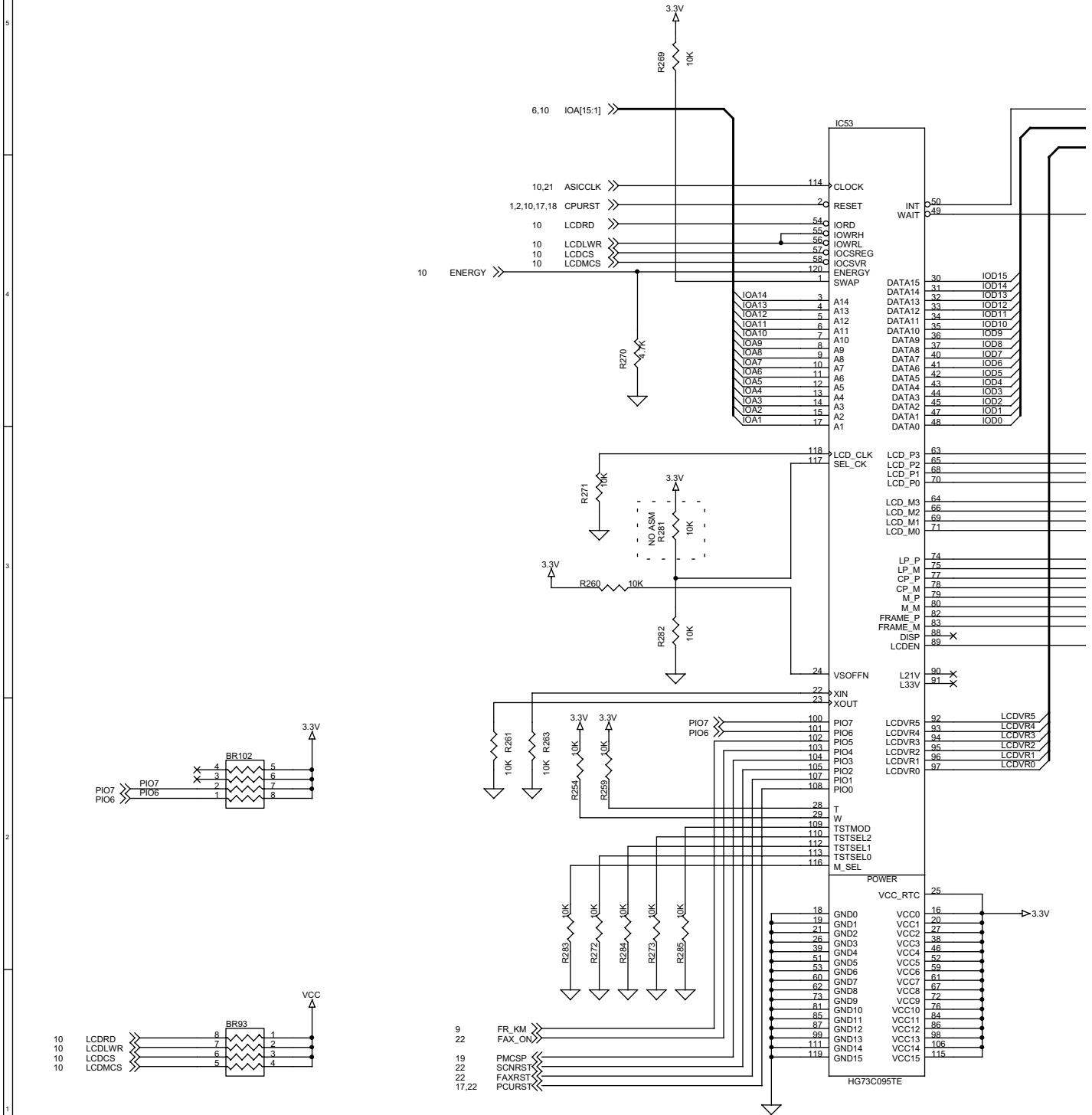


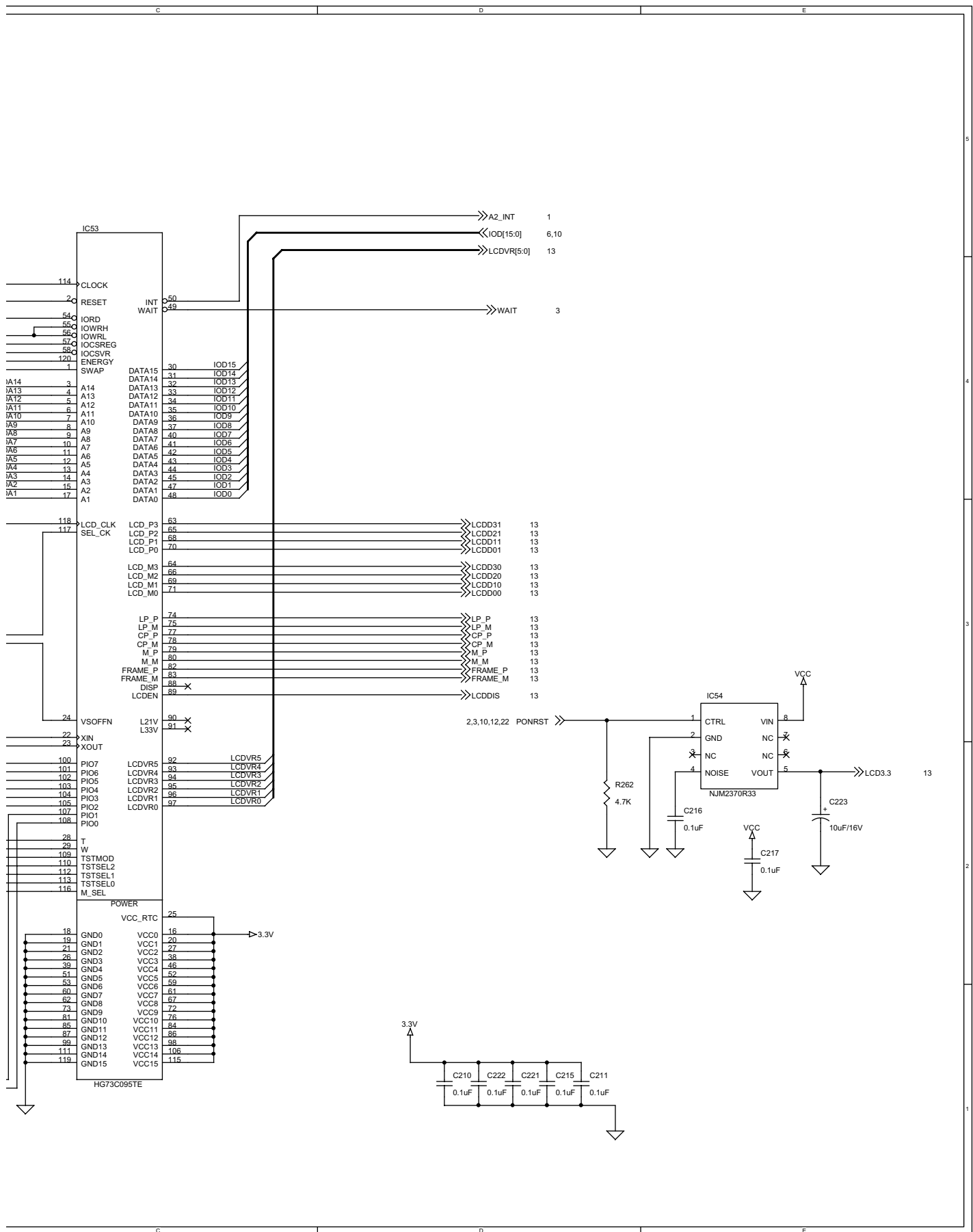




AR-M350U CIRCUIT DIAGRAM 9-27

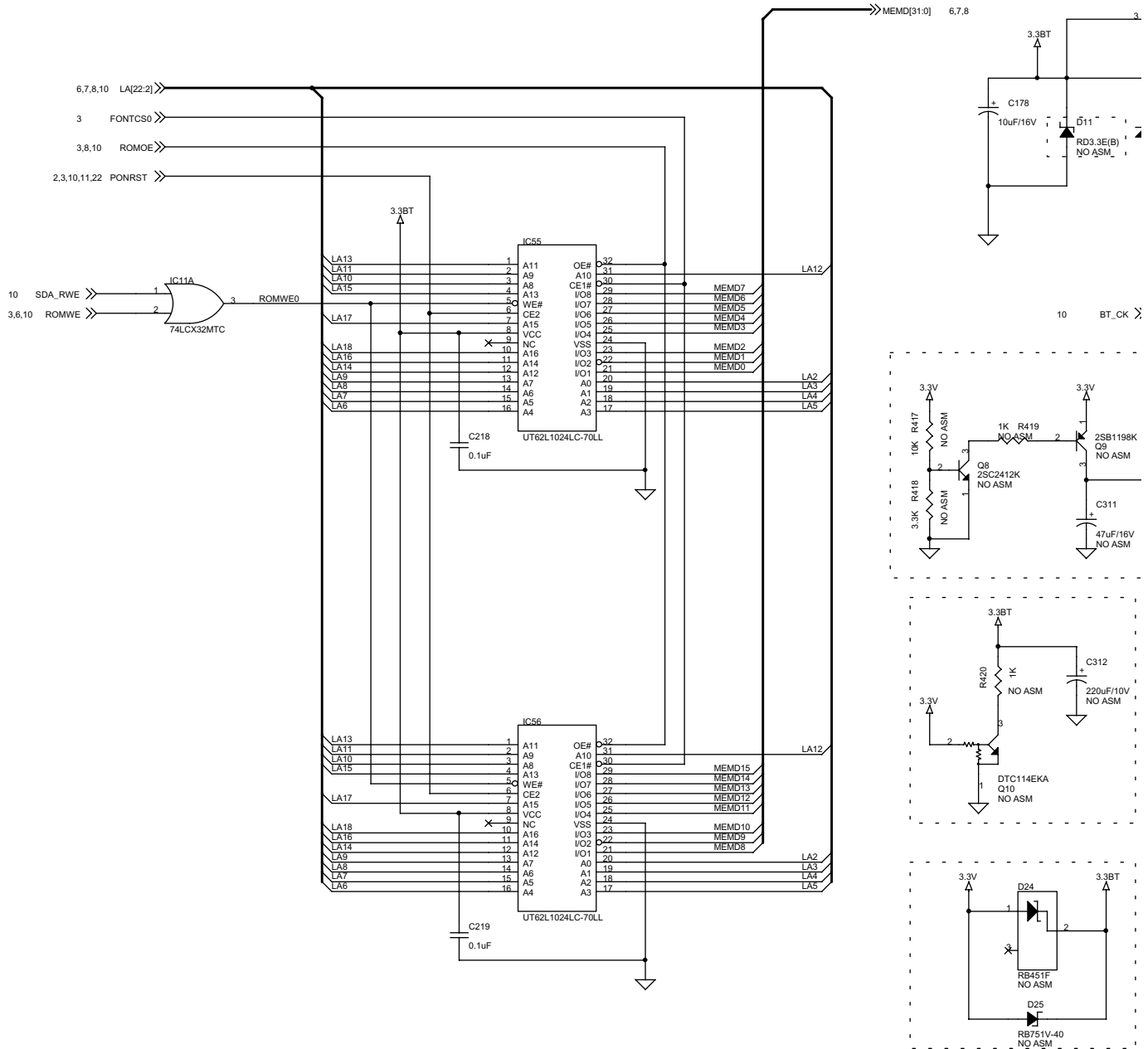
[ASIC2]





[SRAM / BATTERY]

7,9,13,15 FVCCW

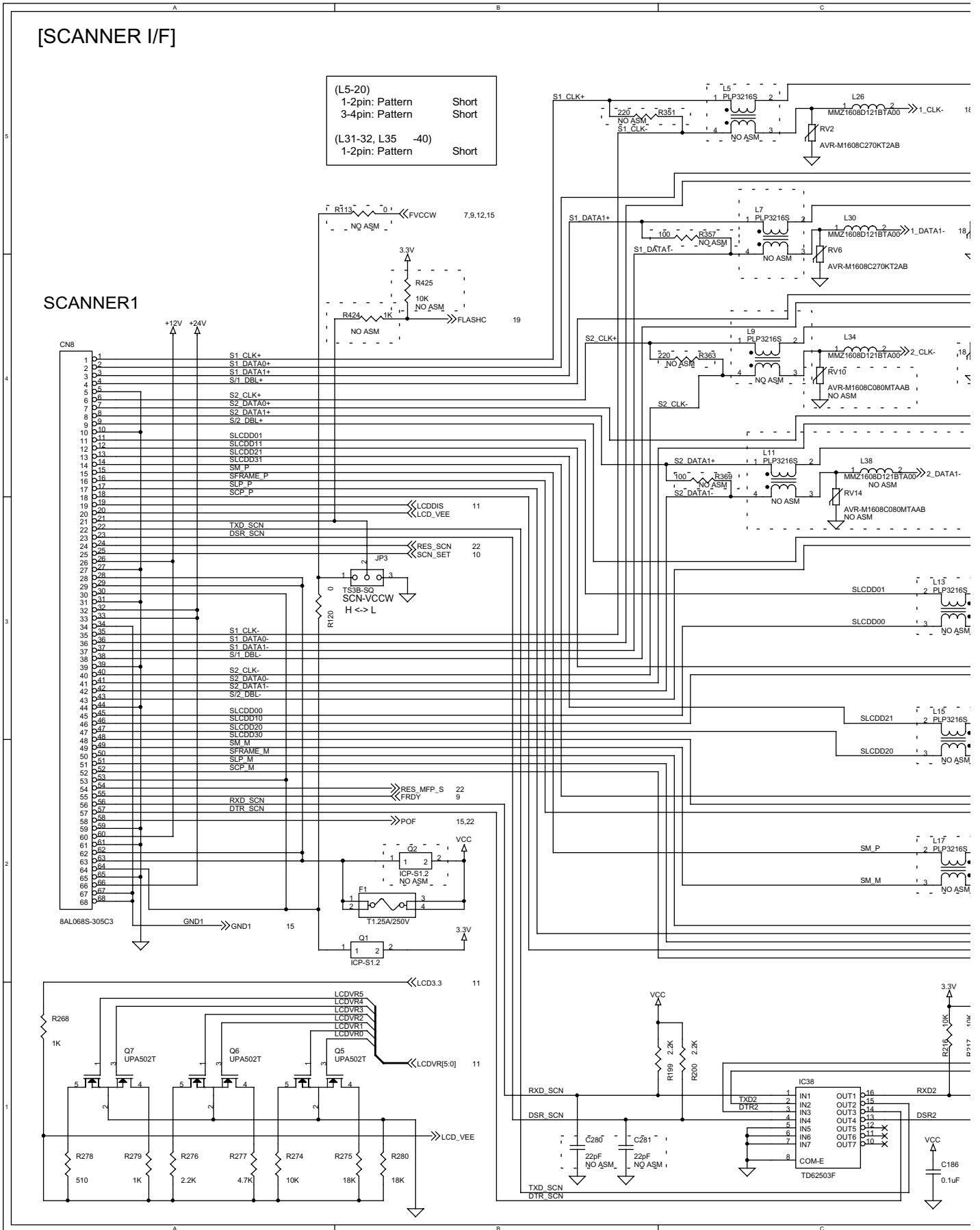


[SCANNER I/F]

(L5-20)
1-2pin: Pattern Short
3-4pin: Pattern Short

(L31-32, L35 -40)
1-2pin: Pattern Short

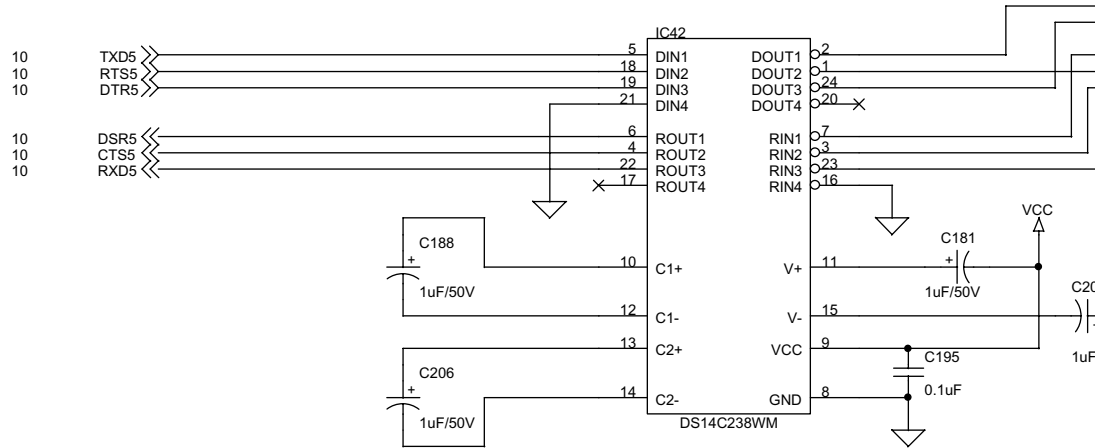
SCANNER1



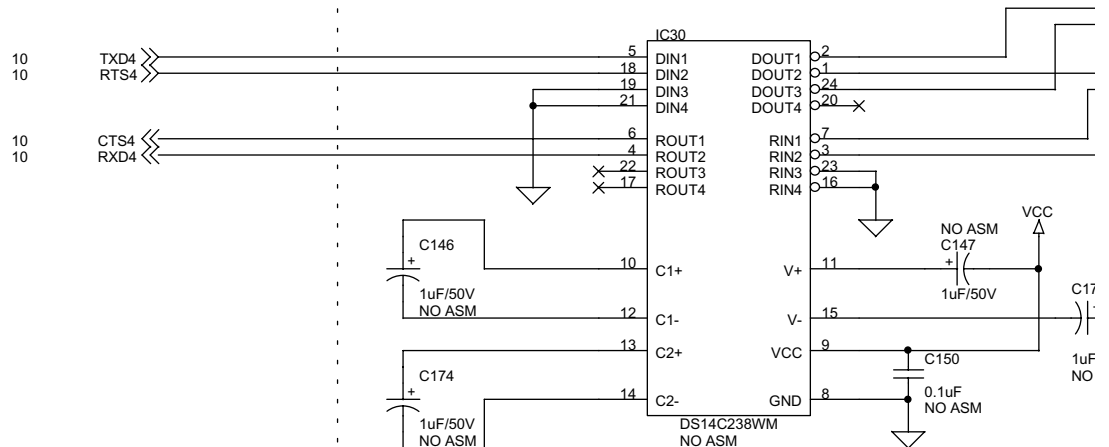


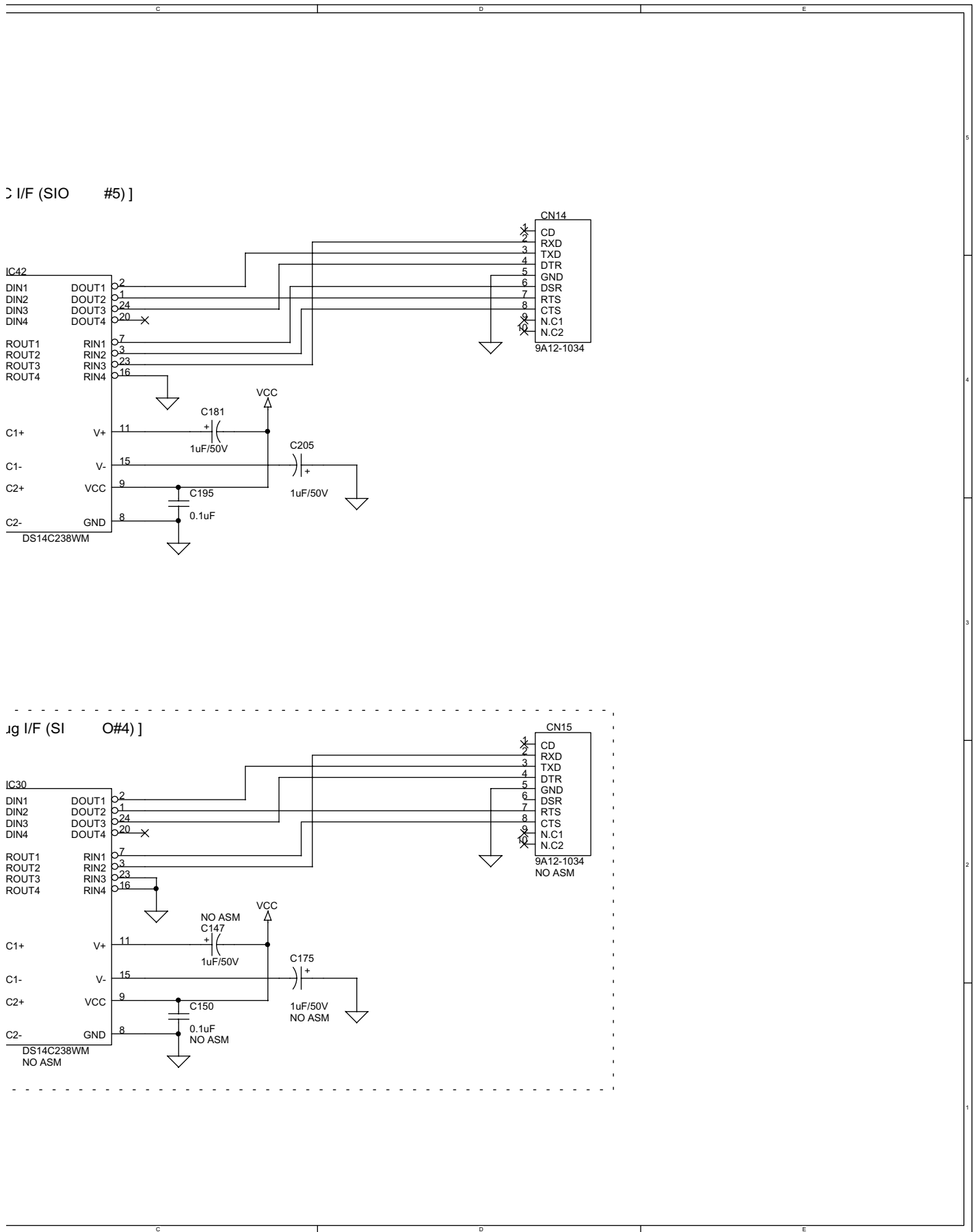
[SIO]

[RIC I/F (SIO #5)]

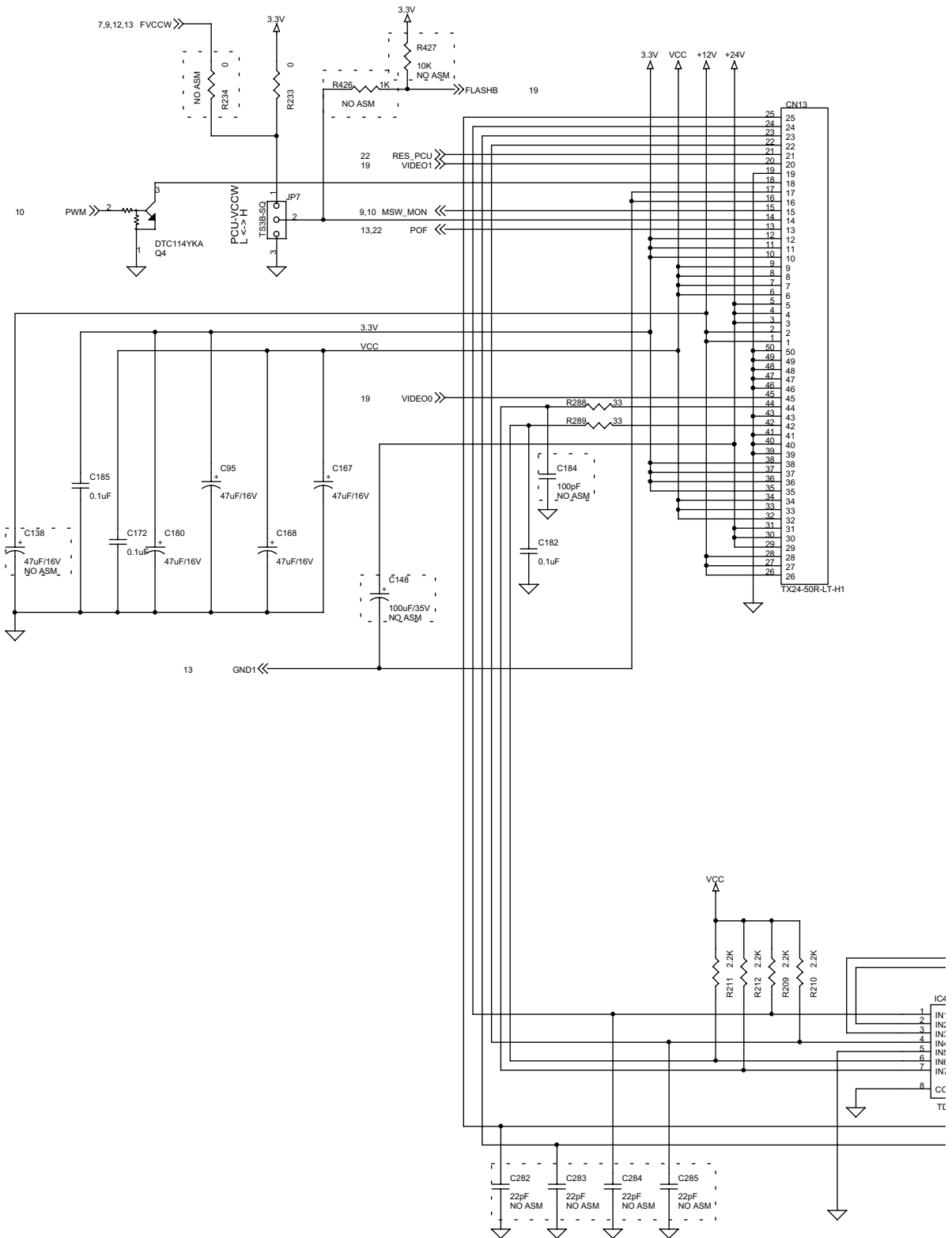


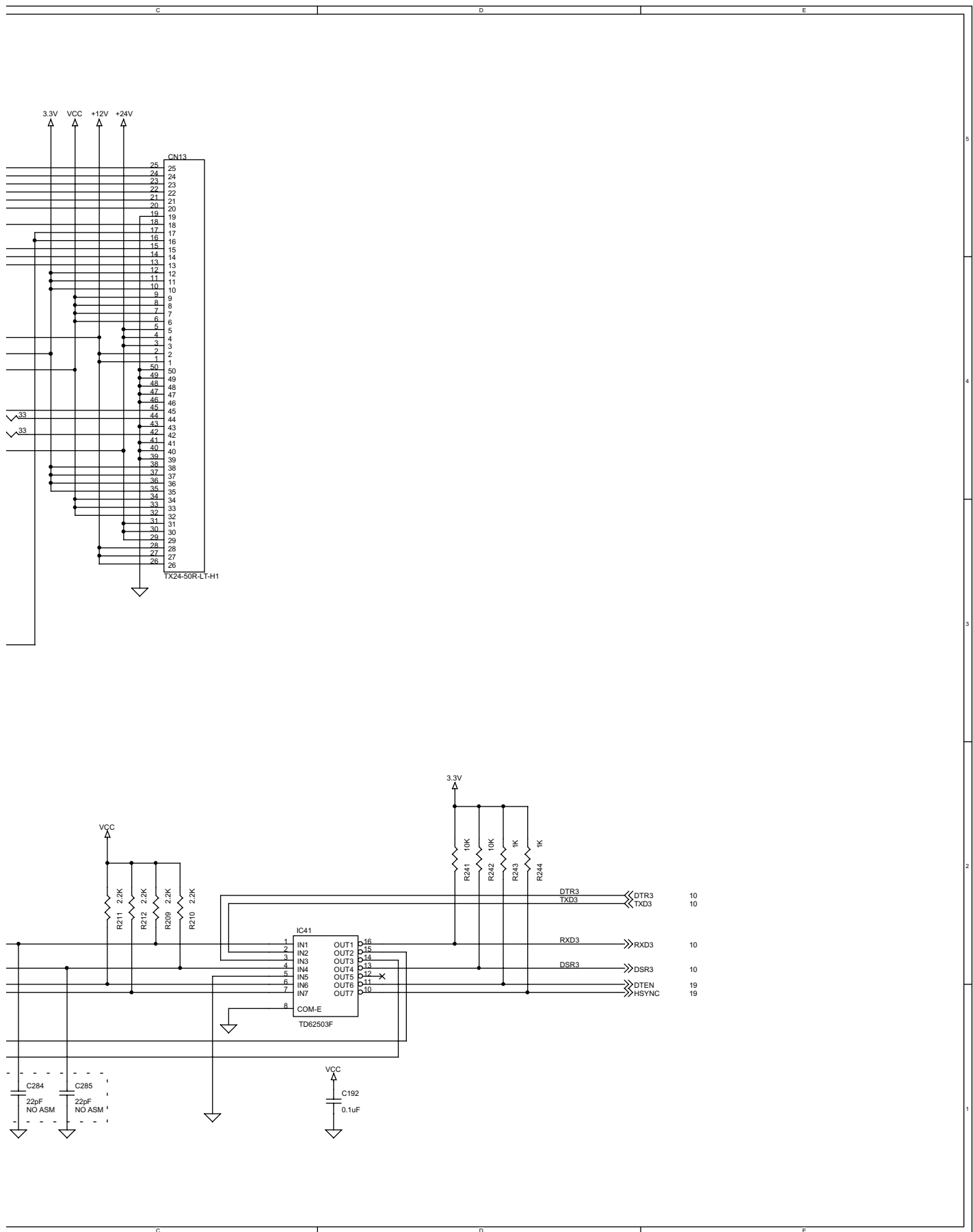
[Debug I/F (SIO #4)]



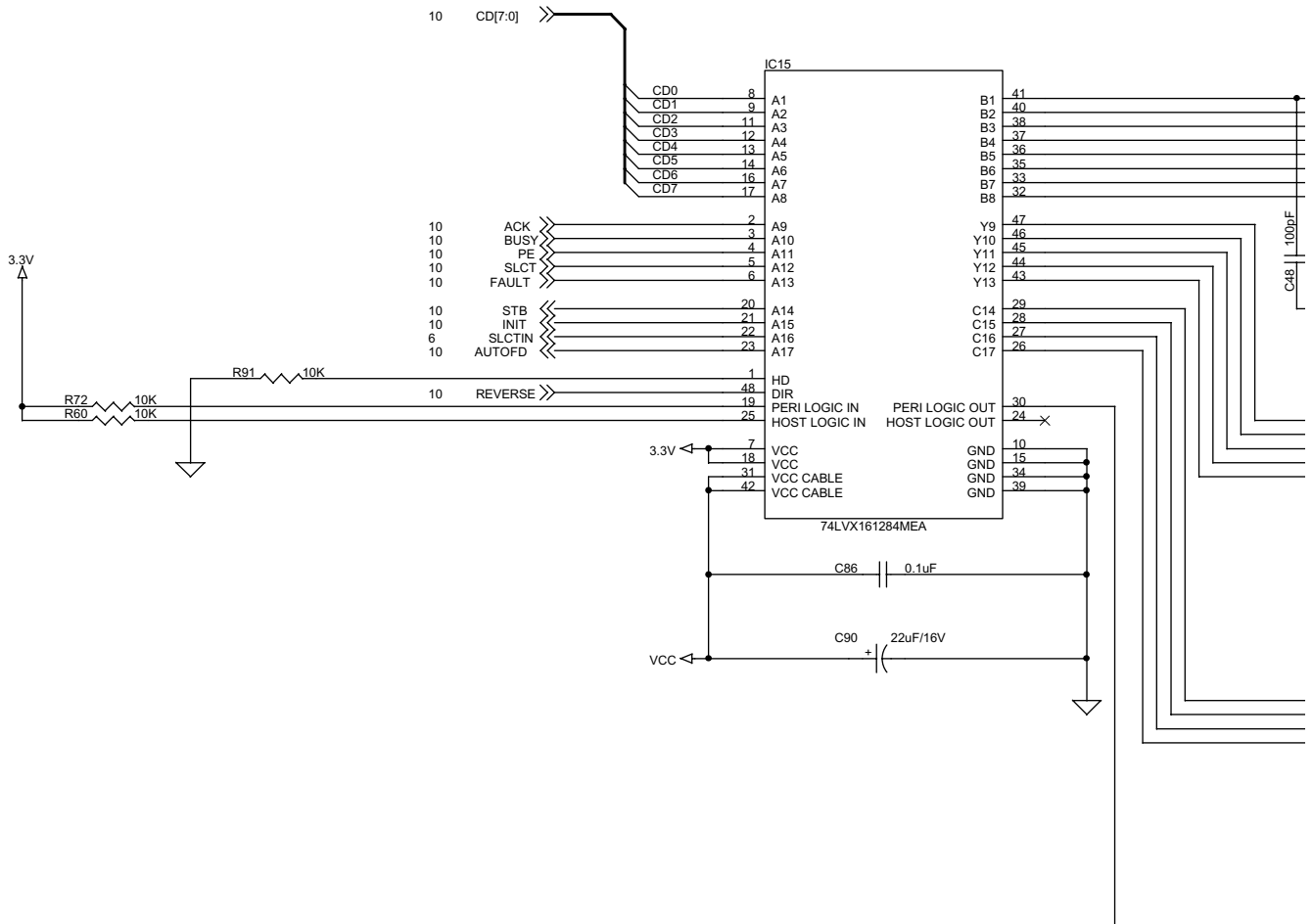


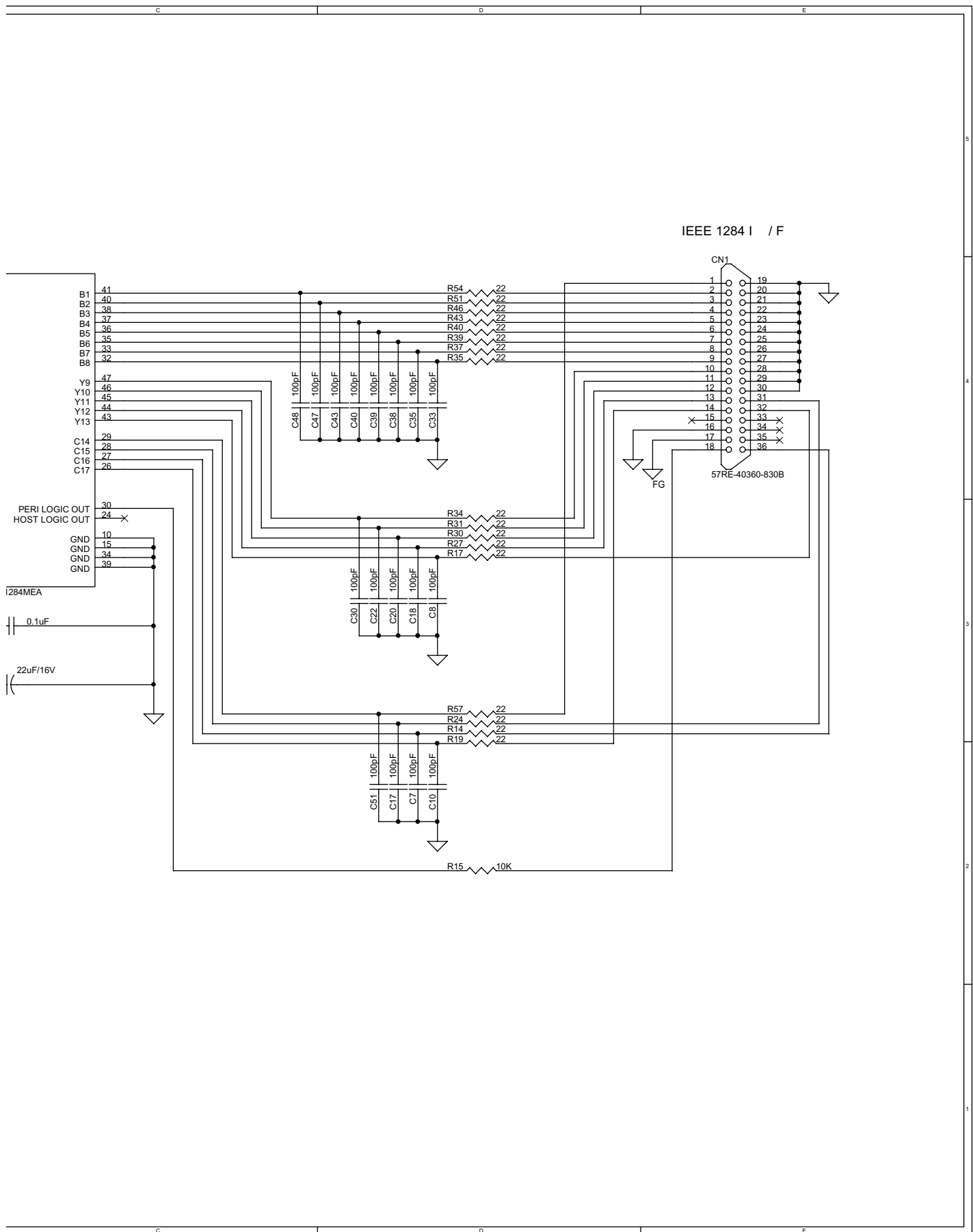
[ENGINE I/F CN]



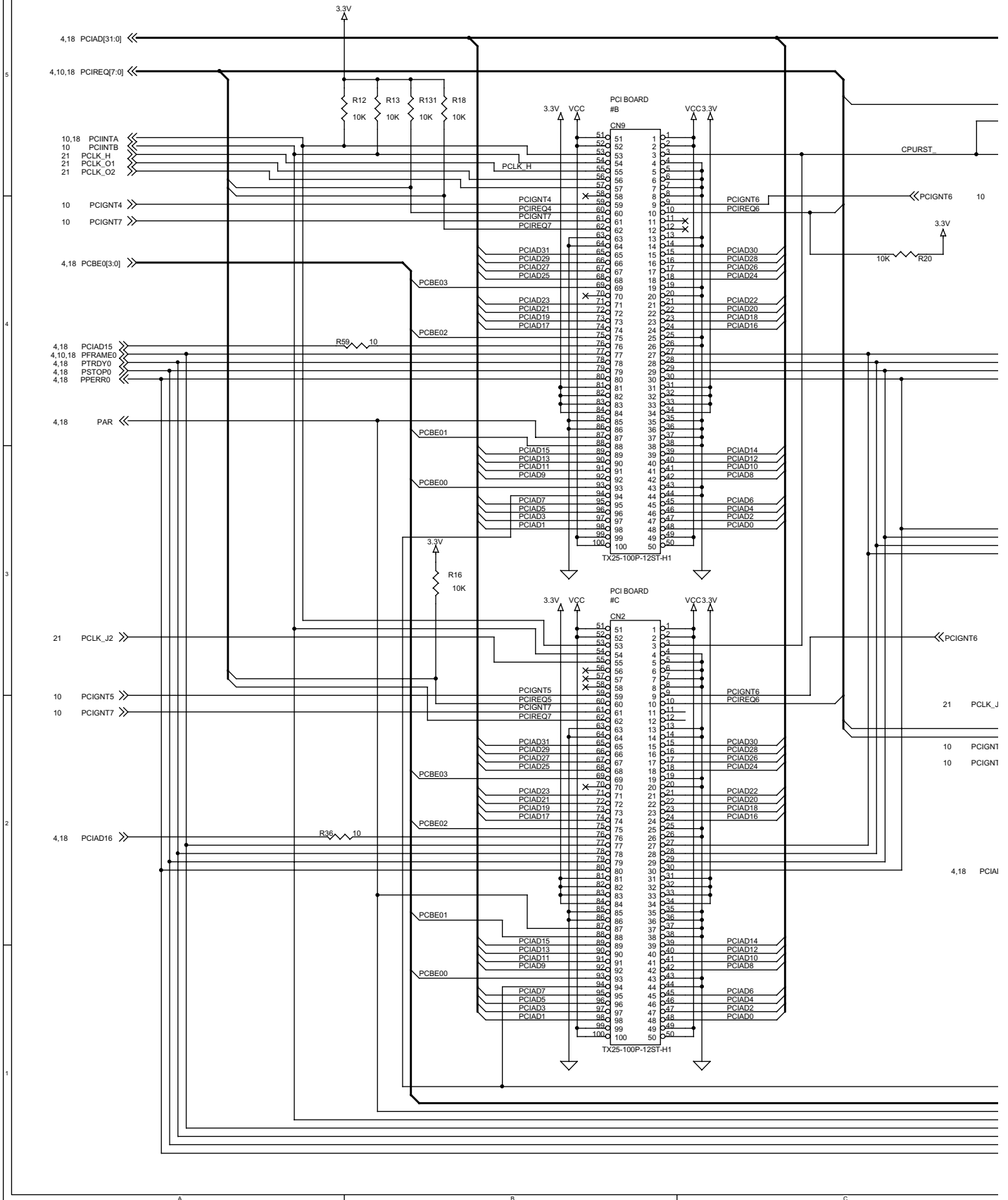


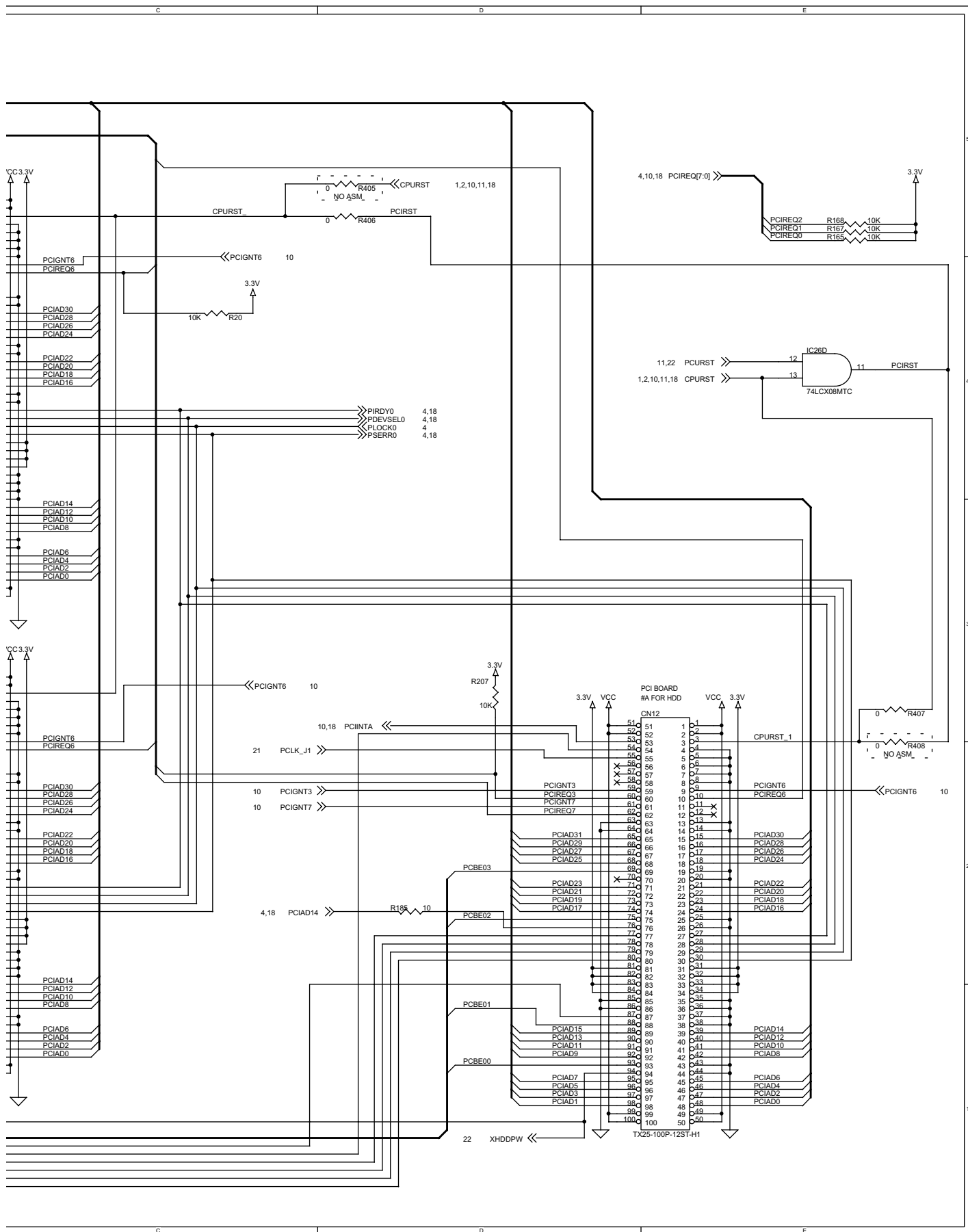
[IEEE1284 I/F]





[PCI BOARD CONNECTOR]

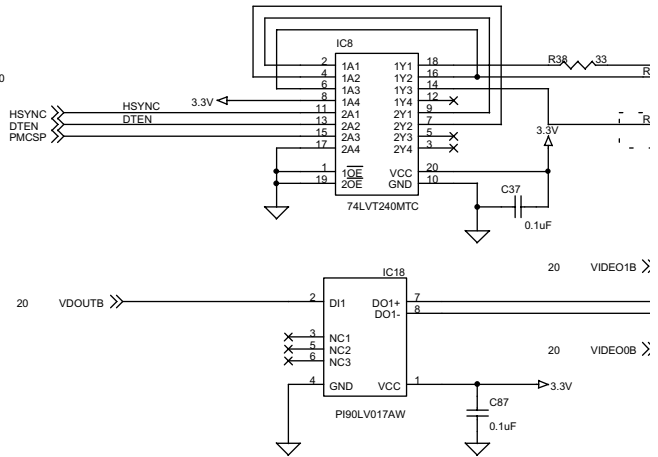
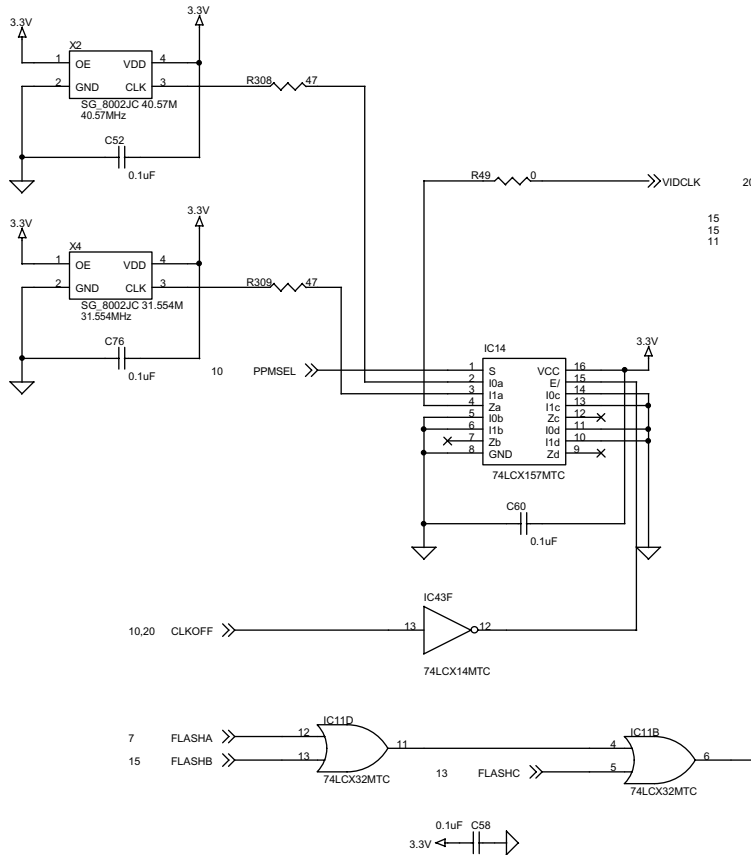
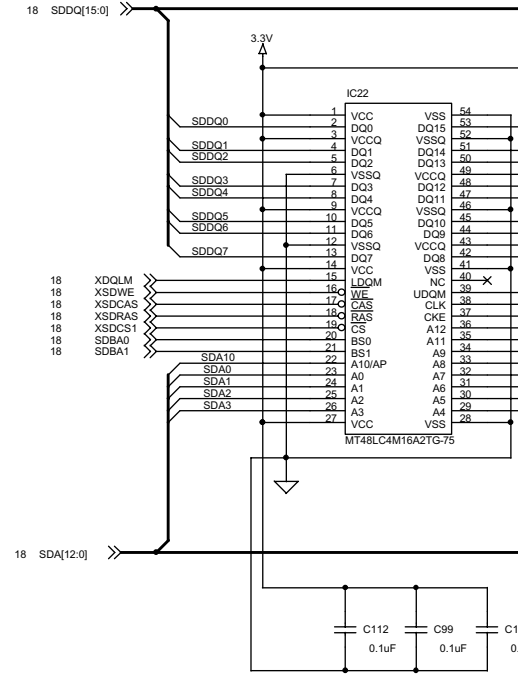
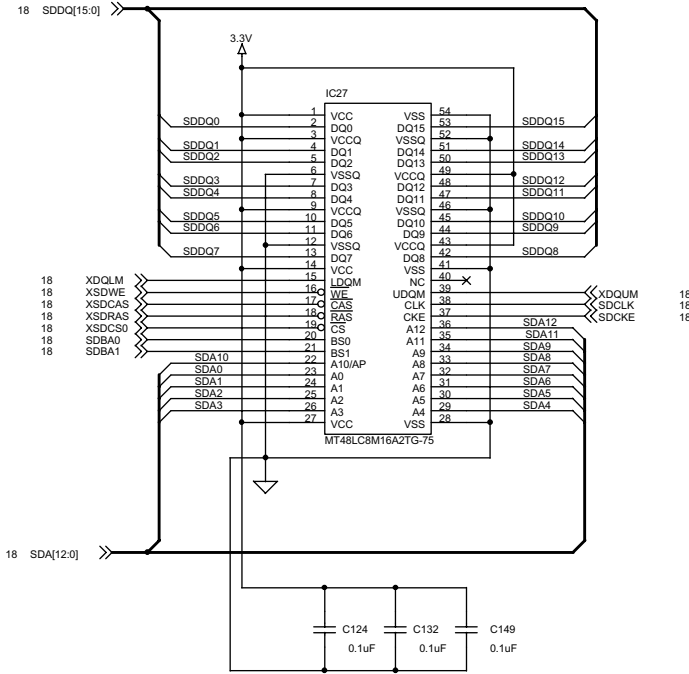


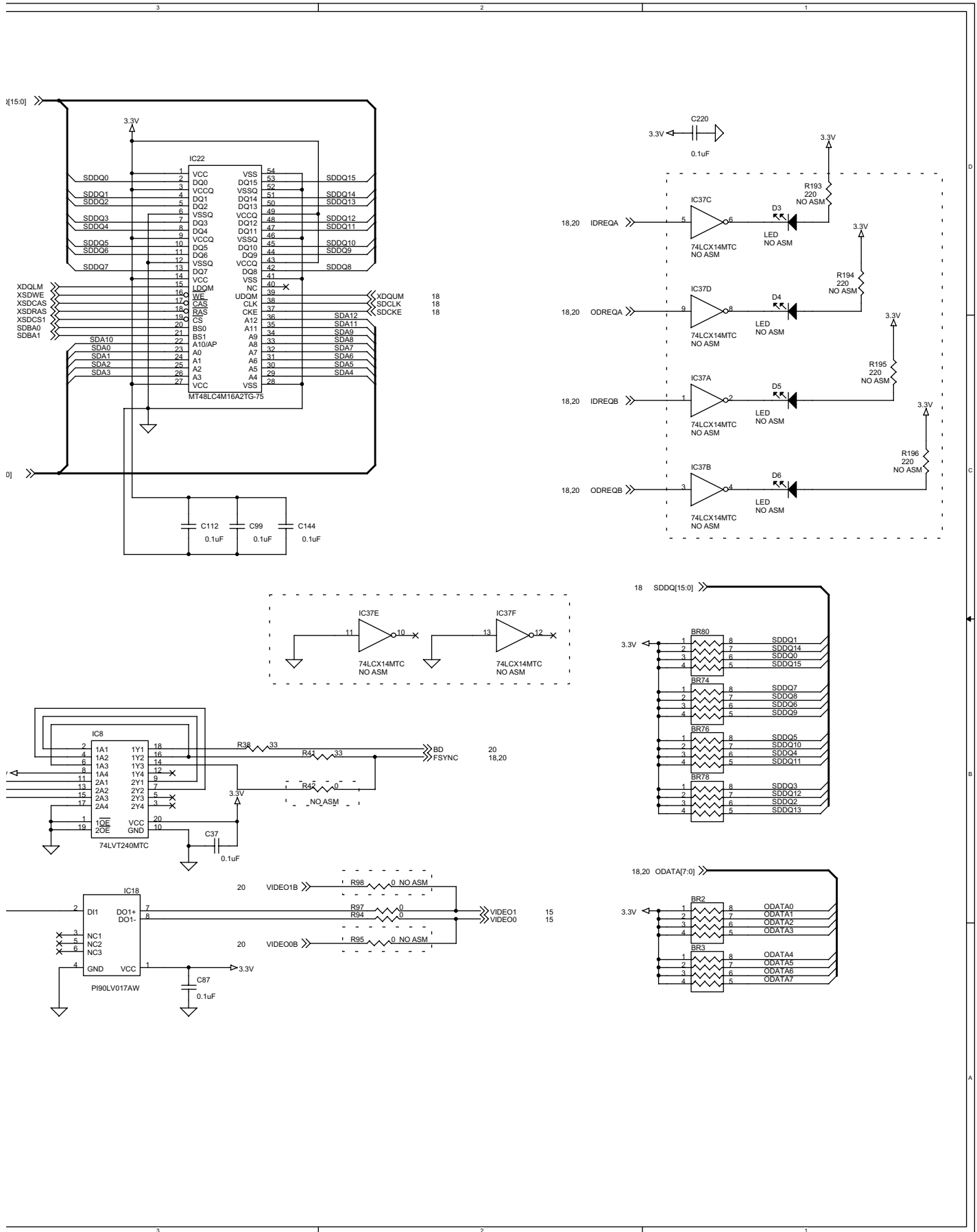


The diagram illustrates the internal architecture and external connections of the ICU ASIC. Key components and their connections include:

- Memory Banks:** SDDQ0-SDDQ15, SDOQ0-SDOQ15, and SDOQ16-SDOQ19 are connected to the top of the chip. SDOQ16-SDOQ19 are connected to external memory (SDRAM I/F).
- Front Scan ASIC I/F:** Includes FSCNENP, FSCNENN, FSCNCLKN, FSCNCLKP, FSCNDAN, ADDGND, FSCNDAP, FSCNDBN, FSCNDBP, ADDGND, FBIA5, VDDI, ADDVDE, RETPMA0, RETPMA1, RETPMA2, RETPMA3, XRETPMCS, GND, VDDI, RETPMD0, RETPMD1, RETPMD2, RETPMD3, RETPMD4, RETPMD5, RETPMD6, RETPMD7, RETPMD8, RETPMD9, GND, RETPMD10, RETPMD11, RETPMD12, RETPMD13, RETPMD14, RETPMD15, XIOWR, XIOR, XPMACS, GND, CDADQ0, CDADQ1, CDADQ2, CDADQ3, CDADQ4, CDADQ5, CDADQ6, CDADQ7, CDADQ8, CDADQ9, VDDI, CDADQ10, CDADQ11, CDADQ12, CDADQ13, CDADQ14, CDADQ15, ADDVDE, VDDI, CDADQ16, CDADQ17, CDADQ18, CDADQ19, XIOACKA, XIOACKB, XIOACKC, XIOACKD, XIOACKE, XIOACKF, XIOACKG, XIOACKH, XIOACKI, XIOACKJ, XIOACKK, XIOACKL, XIOACKM, XIOACKN, XIOACKO, XIOACKP, XIOACKQ, XIOACKR, XIOACKS, XIOACKT, XIOACKU, XIOACKV, XIOACKW, XIOACKX, XIOACKY, XIOACKZ, XIOACKAA, XIOACKAB, XIOACKAC, XIOACKAD, XIOACKAE, XIOACKAF, XIOACKAG, XIOACKAH, XIOACKAI, XIOACKAJ, XIOACKAK, XIOACKAL, XIOACKAM, XIOACKAN, XIOACKAO, XIOACKAP, XIOACKAQ, XIOACKAR, XIOACKAS, 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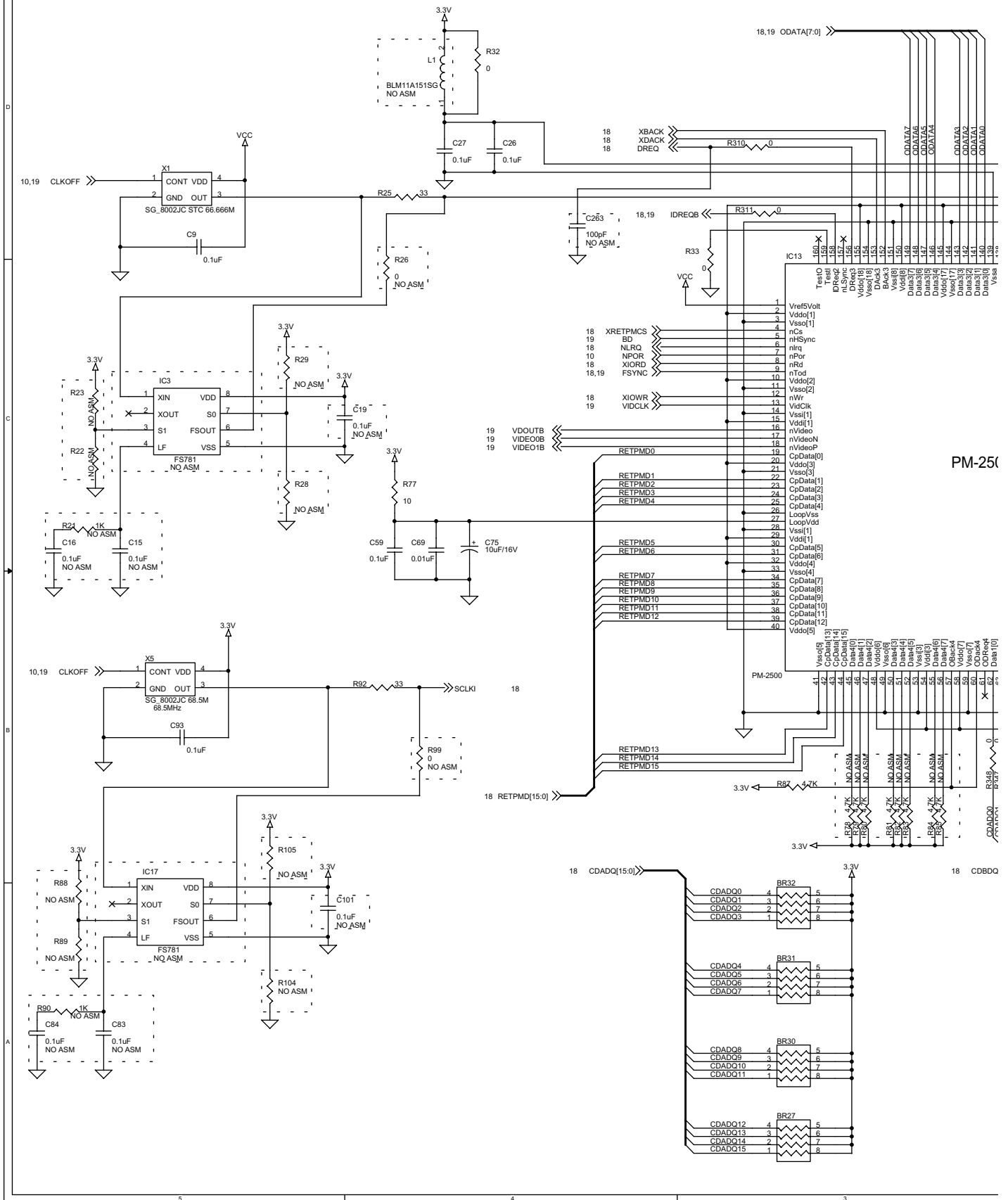
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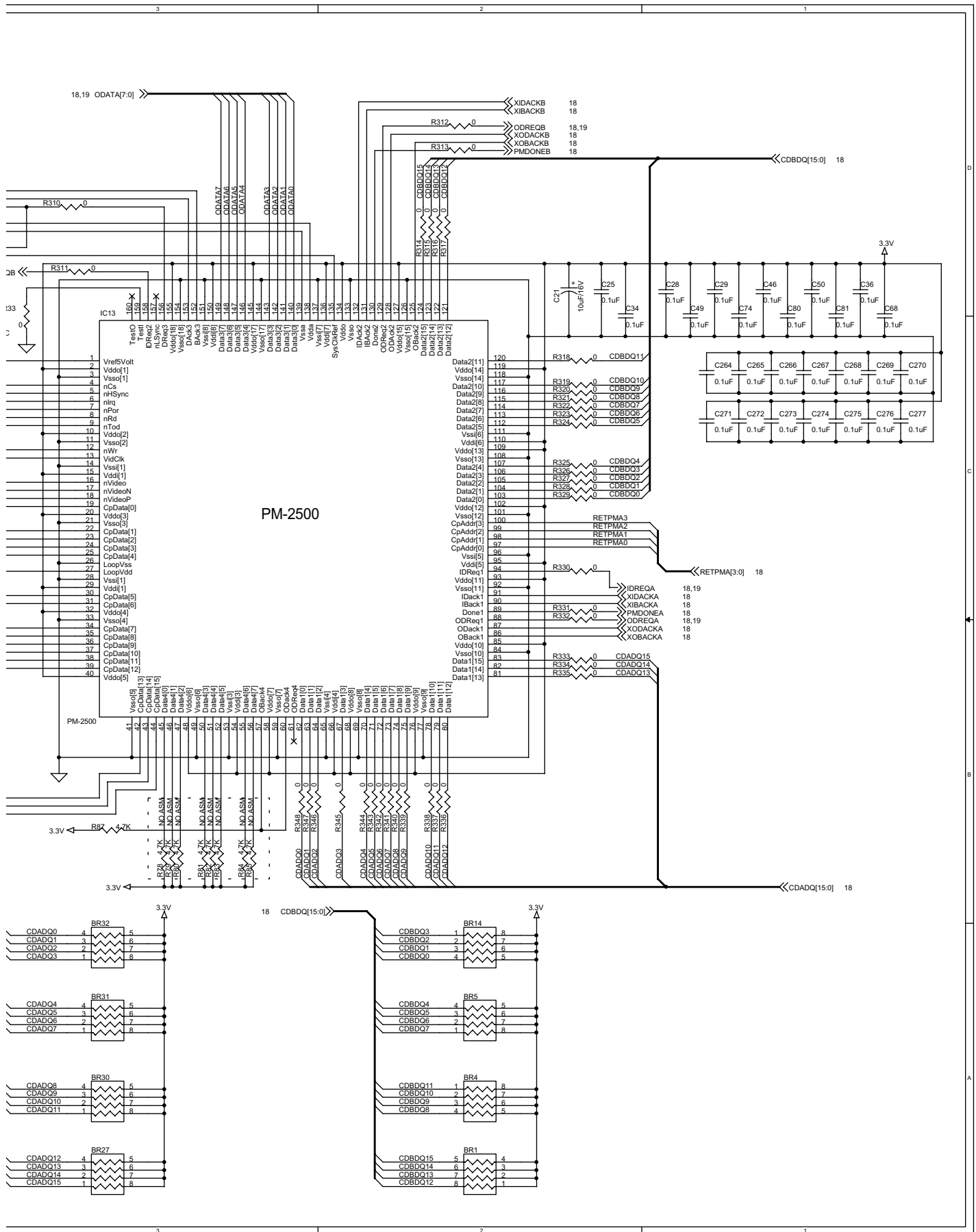




AR-M350U CIRCUIT DIAGRAM 9-45

[PM-2500]





[CLOCK]

The diagram illustrates the clock circuitry for a PCB layout, featuring two PIC2309-1HW microcontrollers and a 74LCX74MTC Schmitt trigger.

Microcontroller ICs:

- IC9 (PIC2309-1HW):** Connected to a 3.3V supply (VDD) and ground (GND). It has multiple clock inputs (CLKA1, CLKA2, CLKA3, CLKA4, CLKB1, CLKB2, CLKB3, CLKB4) and a clock output (CLKOUT). It is also connected to a 3.3V supply (VDD) and ground (GND).
- IC29 (PIC2309-1HW):** Similar to IC9, it is connected to a 3.3V supply (VDD) and ground (GND). It has multiple clock inputs (CLKA1, CLKA2, CLKA3, CLKA4, CLKB1, CLKB2, CLKB3, CLKB4) and a clock output (CLKOUT). It is also connected to a 3.3V supply (VDD) and ground (GND).

74LCX74MTC (IC10): A Schmitt trigger. It is connected to a 3.3V supply (VDD) and ground (GND). It has multiple inputs (S, C1, 1D, R) and outputs (FWE, FWE0, PCLK_DR). It is also connected to a 3.3V supply (VDD) and ground (GND).

Resistors:

- R55 (47Ω):** Connected between the 3.3V supply and the 66CLK signal line.
- R71 (4.7KΩ):** Connected between the 3.3V supply and the 66CLK signal line.
- R53 (47Ω):** Connected between the 3.3V supply and the FWE0 signal line.
- R70 (10KΩ):** Connected between the 3.3V supply and the 33CLK signal line.
- R172 (0Ω):** Connected between the 3.3V supply and the PCLK_DR signal line.

Capacitors:

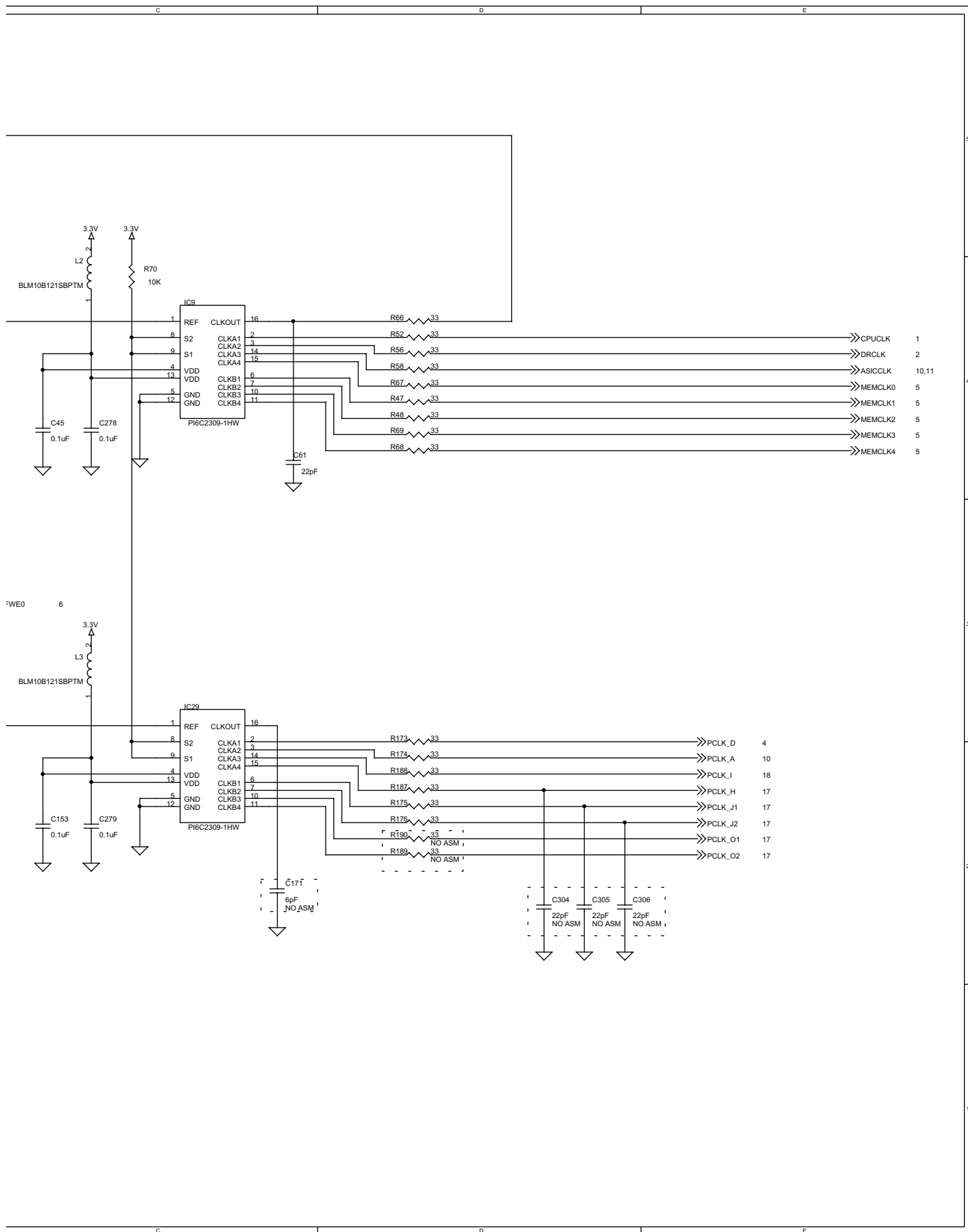
- C55 (0.1μF):** Connected between the 3.3V supply and ground.
- C45 (0.1μF):** Connected between the 3.3V supply and ground.
- C278 (0.1μF):** Connected between the 3.3V supply and ground.
- C56 (0.1μF):** Connected between the 3.3V supply and ground.
- C153 (0.1μF):** Connected between the 3.3V supply and ground.
- C279 (0.1μF):** Connected between the 3.3V supply and ground.
- C177 (6pF):** Connected between the 3.3V supply and ground.

Inductors:

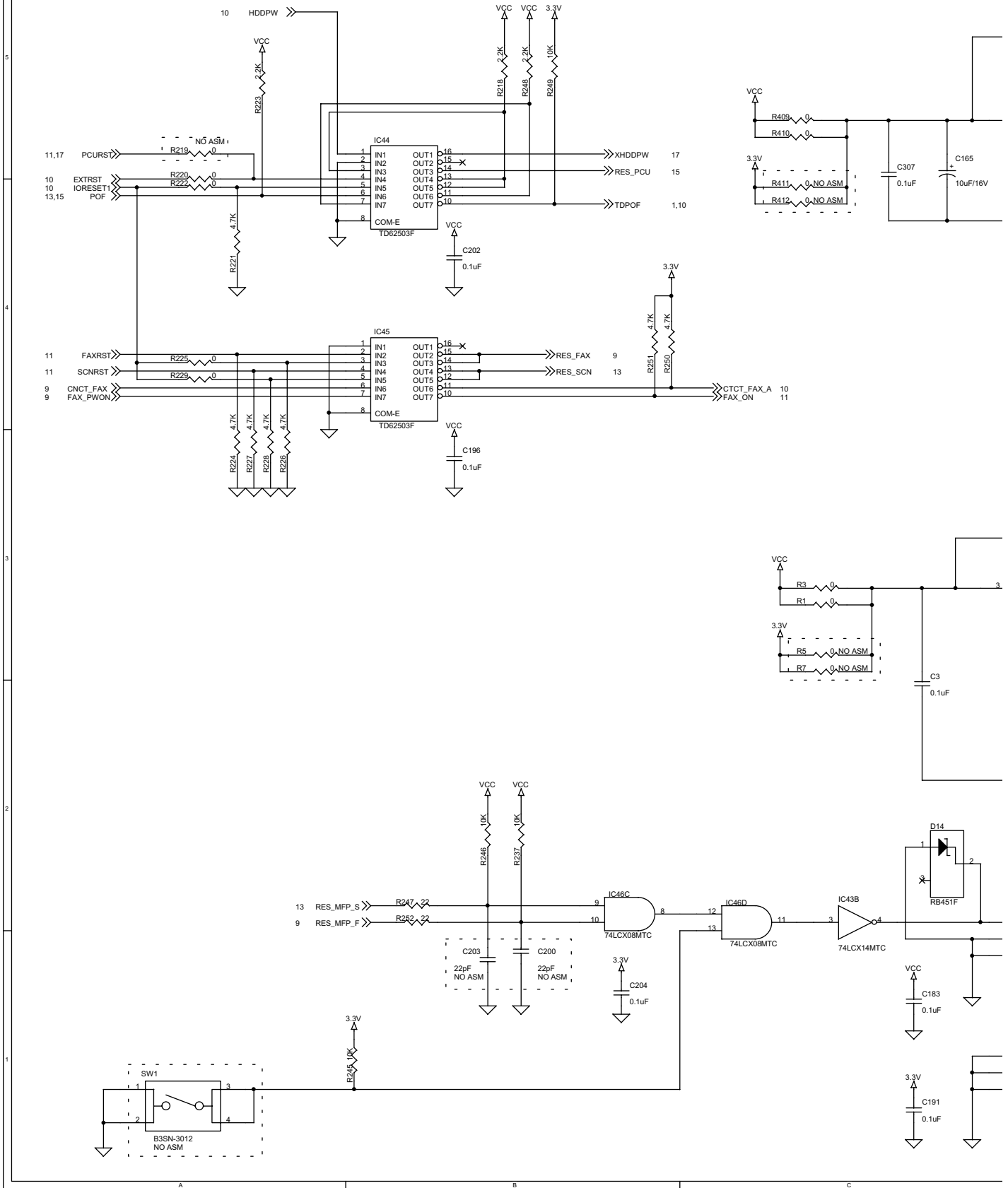
- L2 (BLM10B121SBPTM):** Connected between the 3.3V supply and the 66CLK signal line.
- L3 (BLM10B121SBPTM):** Connected between the 3.3V supply and the 33CLK signal line.

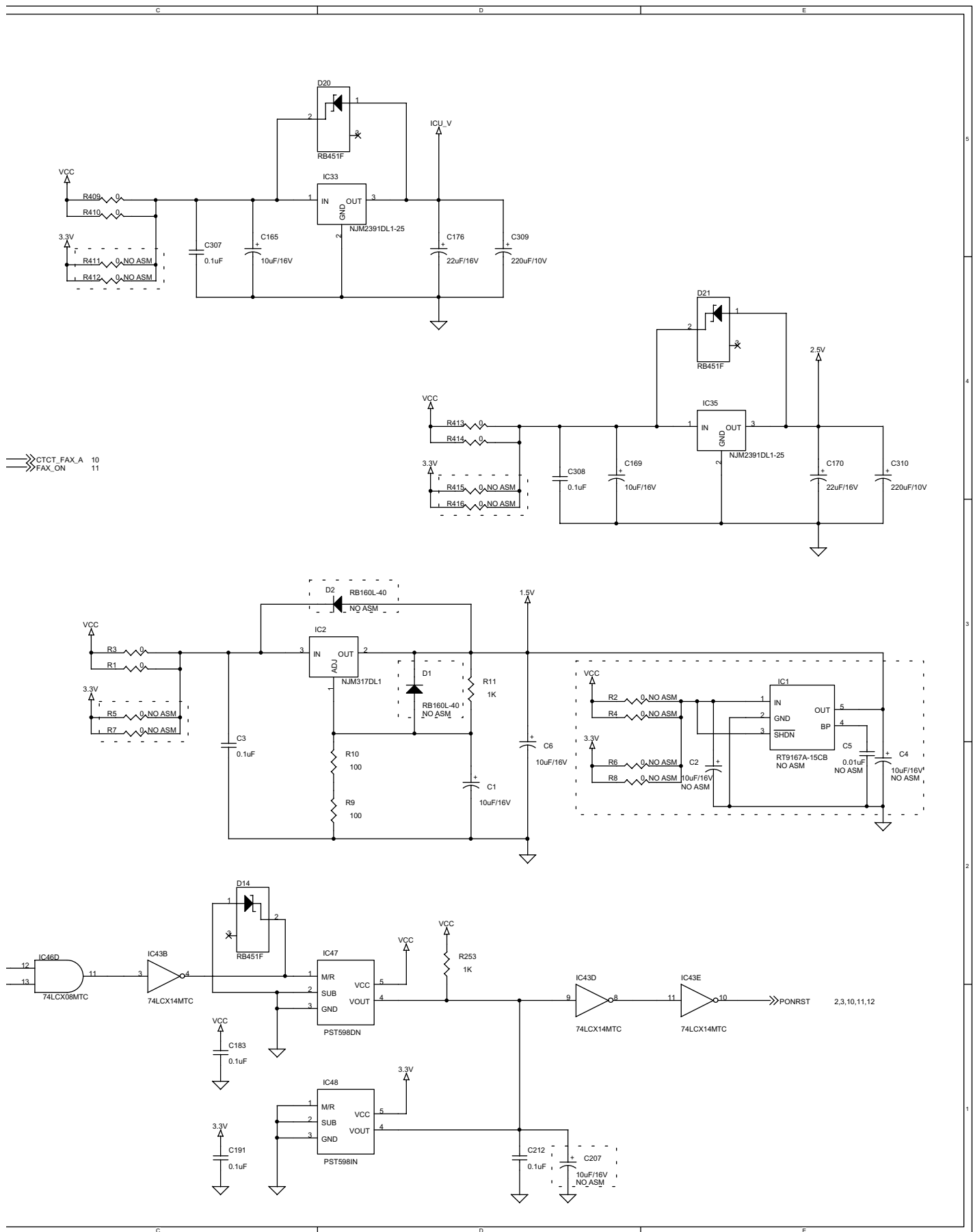
Signal Lines:

- 66CLK:** A signal line connecting the 3.3V supply to the 66CLK input of IC9.
- 33CLK:** A signal line connecting the 3.3V supply to the 33CLK input of IC29.
- FWE:** A signal line connecting the 3.3V supply to the FWE input of IC10.
- FWE0:** A signal line connecting the 3.3V supply to the FWE0 output of IC10.
- PCLK_DR:** A signal line connecting the 3.3V supply to the PCLK_DR input of IC10.



[RESET / POWER]





AR-M350U CIRCUIT DIAGRAM 9-51

CAUTION FOR BATTERY REPLACEMENT

(Danish)

ADVARSEL !

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English)

Caution !

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish)

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French)

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish)

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German)

Achtung

Explosionsgefahr bei Verwendung inkorrektter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CAUTION FOR BATTERY DISPOSAL

(For USA, CANADA)

Contains lithium-ion battery. Must be disposed of properly.
Remove the battery from the product and contact
federal or state environmental
agencies for information on recycling and disposal options.

SHARP

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SHARP CORPORATION
Digital Document System Group
Products Quality Assurance Department
Yamatokoriyama, Nara 639-1186, Japan

2002 February Printed in Japan (N)